

**FAA NATIONAL
OPERATIONS AND TRAINING MANUAL
FOR THE ACCEPTANCE AND
TRANSPORT OF DANGEROUS GOODS**



January 1, 2005

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Record of Changes

FAA NATIONAL OPERATIONS AND TRAINING MANUAL FOR THE ACCEPTANCE AND TRANSPORT OF DANGEROUS GOODS IN AIR TRANSPORTATION

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FAA NATIONAL OPERATIONS AND TRAINING MANUAL FOR THE ACCEPTANCE AND TRANSPORT OF DANGEROUS GOODS

(Air Carrier Name)

(Certificate Number)

(Physical Address)

(City)

(State)

(Zip Code)

(Telephone)

(Fax)

(Signature Block)
Corporate Officer

(Signature Block)
Responsible Hazardous Materials
Officer

Date

Date

Statement of Intent:

This Dangerous Goods Operations and Training Manual shall be followed by all employees, agents, and contract employees when they are involved in the acceptance, handling, storage, and transportation of DG/HM in air commerce.

Will Transport Commercial DG? ☐ YES ☐ NO

Will Transport Own DG Company Material (COMAT)? ☐ YES ☐ NO

Recommend Acceptance/Approval
Hazardous Materials Branch Manager

Accepted/Approved
FSDO Principal Operations Inspector

Date

Date

FAA NATIONAL DANGEROUS GOODS OPERATIONS AND TRAINING MANUAL

This Dangerous Goods Operations and Training Manual complies with the requirements found in 14 CFR.

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FAA NATIONAL DANGEROUS GOODS OPERATIONS AND TRAINING MANUAL

GENERAL

Notwithstanding the contents of this manual, this air carrier is responsible for compliance with all provisions of the Hazardous Material Regulations (HMR), Title 49, Code of Federal Regulations (49 CFR). This air carrier shall review this manual at least annually to ensure compliance with 49 CFR.

A current copy of this manual and the Dangerous Goods/Hazardous Materials (DG/HM) regulations found in 49 CFR Parts 107-185 (or a current copy of International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air or the International Air Transport Association (IATA) Dangerous Goods Regulations, if desired) shall be available at each air carrier station. The North American Emergency Response Guidebook (or equivalent information) shall be aboard each aircraft transporting DG/HM.

This Dangerous Goods Operations and Training Manual shall be followed by all employees, agents, and contract employees when they are involved in the acceptance, handling, storage, and transportation of DG/HM in air commerce.

The terms **Dangerous Goods and Hazardous Materials** are synonymous and may be used interchangeably. Dangerous goods and hazardous materials are sometimes also referred to as regulated materials, restricted articles, and dangerous materials. Definitions of common terms applicable to DG/HM are found in 49 CFR 171.8, Definitions and Abbreviations.

Employees, agents, and contract employees of this air carrier may not perform any assigned duties or responsibilities involving the acceptance, handling, storage, or transportation of DG/HM unless they have satisfactorily completed Dangerous Goods Training within the last 12 calendar months. The training requirements are found in Part Two of this manual.

No employee, agent, or contract employee of this air carrier may prepare DG/HM for shipment, including Company Material (COMAT), unless trained in this function.

This air carrier shall ensure that the notice required by 49 CFR 175.25 is prominently displayed at all facility locations where passengers are ticketed, boarded, and/or baggage is checked. The notice required by 49 CFR 175.26 shall be prominently displayed at each facility location where cargo is accepted.

PART ONE

DANGEROUS GOODS OPERATIONS

I. ACCEPTANCE PROCEDURES

Persons (shippers) offering DG/HM for air transportation are responsible for properly identifying, describing, classifying, packaging, marking, and labeling the materials as required by either 49 CFR or ICAO. They are also responsible for properly completing the communications and packaging requirements prior to offering the shipment for transportation.

Air carrier employees, agents, and contract employees may rely on the certification and information provided by the shipper to determine if the DG/HM shipment is authorized for air transportation. All employees, agents, and contract employees of this air carrier responsible for the acceptance of cargo or baggage shall be provided a trigger list of indicators of undeclared DG/HM (**See Appendix A, Hidden Shipment Indicators**) to assist them in their review.

Domestic shipments may be offered in compliance with either 49 CFR or ICAO requirements. The shipper chooses which regulations to use and the chosen regulations must be complied with entirely. Shipments following ICAO must also comply with 49 CFR 171.11.

If the shipment is offered in accordance with ICAO, the accepting employee, agent, or contract employee must also ensure that the shipper has complied with all applicable US Variations to the ICAO Dangerous Goods Table.

This air carrier will use a checklist (**See Appendix B, Acceptance Checklist**) that will include all reasonable steps to ensure that:

- any package containing DG/HM which is damaged or leaking shall be refused without any further processing;
- the material is properly described on the shipping papers;
- the required certification is on the shipping papers;
- the authorized package is marked and labeled as required;
- the shipment is authorized to be transported by aircraft in the condition offered; and
- emergency response information accompanies the shipment.

This air carrier shall maintain a supply of labels at each facility where DG/HM is accepted, stored, or otherwise prepared for transportation in air commerce. Only an employee, agent, or contract employee of this air carrier who is trained in the acceptance procedures may replace a lost or detached label, and is required to do so, in accordance with the information presented by the shipper on the shipping papers (See 49 CFR 175.40).

A. SHIPPING DOCUMENTS AND CERTIFICATION

1. If Offered Under Title 49 CFR: The proper shipping name for each DG/HM is found in 49 CFR 172.101, the Hazardous Materials Table (HMT). The basic description must include the proper shipping name (supplemented with the technical name(s), if required) found in Column 2, the hazard class or division prescribed as shown in Column 3, the identification number prescribed in Column 4, and the packing group in roman numerals prescribed in Column 5. This basic description must be in proper sequence. Listed next is the total quantity of the material by weight or volume and type of packaging. The emergency response telephone number and additional entry requirements follow the basic description and quantity.

The shipper's certification must appear on the shipping document and be signed by a representative of the shipper.

2. If Offered Under ICAO: DG/HM must be accurately described on the dangerous goods transport document by its proper shipping name (supplemented with the technical names(s) if required), class or when assigned - division, UN number, and the appropriate packing group. These four elements of the basic dangerous goods description must always be provided in the proper sequence. In addition to the basic dangerous goods description, the following information must be included on the dangerous goods document: quantity per package for every package of each item, type of packing, and packing instructions. The emergency response telephone number and additional entry requirements follow the basic description and quantity.

Whether offered under 49 CFR or ICAO, two copies of the shipping papers must be provided with the shipment. One copy must accompany each shipment, and one copy must be retained for 375 days after the shipment is accepted and be accessible and immediately available at this air carrier's principle place of business. For a hazardous waste, each shipping paper copy must be retained for three years after the material is accepted by this air carrier. Each shipping paper copy must include the date of acceptance by this air carrier.

B. MARKING

This air carrier shall ensure that the proper shipping name and identification number appearing on the shipping paper are also marked on the outside of the package, outside container, or overpack. The name and address of either the consignee or consignor must also be marked on each package. Packages containing liquid hazardous materials must be legibly marked on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. Any additional marking requirements specified in 49 CFR required for the package or material being shipped must be met (e.g., specification package marking, overpack marking, limited quantity, etc.) (See 49 CFR 172.300-172.326).

C. LABELING

In order for a shipper to offer DG/HM for shipment, the package must be properly labeled. Labels are a printed hazard warning. Labels identify primary and subsidiary hazards specific to the material. They also identify handling instructions.

The labeling requirements are found in 49 CFR 172.400-450. Acceptance personnel of this air carrier shall verify that the outside of the package is labeled with the appropriate label(s) from Column 6 of the HMT. Additional handling labels may be required. The “Cargo Aircraft Only” label is for packages containing a quantity of DG/HM that may be shipped only on cargo aircraft or are forbidden for carriage on passenger aircraft but are permitted for carriage on cargo only aircraft per Columns 9A and 9B of the HMT Part 172.

The hazard classes are:

Class 1- Explosives (See 49 CFR 173.50)
 Class 2- Flammable Gas (See 49 CFR 173.115)
 Class 3- Flammable Liquids (See 49 CFR 173.120)
 Class 4- Flammable Solids (See 49 CFR 173.124)
 Class 5- Oxidizers and Organic Peroxides (See 49 CFR 173.127 and 173.128)
 Class 6- Toxic and Infectious Substances (See 49 CFR 173.132 and 173.134)
 Class 7- Radioactive Materials (See 49 CFR 173.403)
 Class 8- Corrosive Materials (See 49 CFR 173.136)
 Class 9- Miscellaneous (See 49 CFR 173.140)
 ORM-D- Other Regulated Materials (See 49 CFR 173.144)

Labels identifying handling instructions are:

“Cargo Aircraft Only” label (See 49 CFR 172.402)
 “Magnetized Material” label (See 49 CFR 173.21(d) and the ICAO Dangerous Goods List for magnetized materials)

Orientation markings are required on packages containing liquids (↑↑) (See 49 CFR 172.312).

These labels are depicted on the Hazardous Materials Marking, Labeling & Placarding Guide (See **Appendix C, DOT Chart**).

D. PLACARDS

Unit Loading Devices (ULD's)/freight containers over 640 cubic feet capacity containing DG/HM, must be placarded in accordance with 49 CFR 172.512(a). ULD's/freight containers less than 640 cubic feet capacity containing DG/HM, must either be placarded or labeled in accordance with 49 CFR 172.512(b). This is an air carrier requirement when consolidating packages for easier handling.

II. COMPANY MATERIALS (COMAT)

COMAT is an industry term developed and used by air carriers and is generally used to describe a wide array of company materials including replacement items for installed equipment and consumable materials. (See **Appendix D, Hazardous Materials Onboard Aircraft**)

COMAT, which meets the definition of a hazardous material, is subject to all regulations that apply to any other commercial DG shipment. Three exceptions that apply only to on-line transportation are listed below.

49 CFR 175.10 is entitled “Exceptions.” Paragraph (a)(2)(i), (ii), and (iii), commonly referred to as the COMAT Exception states, “This subchapter (the HMR) does not apply to:

(2) Hazardous materials required aboard an aircraft in accordance with the applicable airworthiness requirements and operating regulations. Unless otherwise approved by the Associate Administrator for Hazardous Materials Safety, items of replacement for such hazardous materials must be transported in accordance with this subchapter except that -

- (i) In place of the required packaging, packaging specially designed for the transport of aircraft spares and supplies may be used, provided such packaging provide at least an equivalent level of protection to those required by this subchapter **[all other requirements of 49 CFR apply]**;
- (ii) Aircraft batteries are not subject to quantity limitations such as those provided in 49 CFR 172.101 or 175.75(a) of this subchapter **[all other requirements of 49 CFR apply]**; and
- (iii) A tire assembly with a serviceable tire is not subject to the provisions of this subchapter provided the tire is not inflated to a gauge pressure exceeding the maximum rated pressure for that tire.”

This air carrier shall carefully scrutinize all COMAT received from Repair Stations and Parts Suppliers to determine if the material is DG/HM before introducing it into the air transportation system.

Shipments of DG/HM COMAT that are offered for transportation must be in full compliance with all provisions of the Hazardous Materials Regulations. Employees, agents, and contractors who prepare and/or offer DG/HM shipments for transportation must receive additional function-specific training to satisfy all of the requirements for shippers under 49 CFR 172.700.

III. LOADING/STOWAGE/HANDLING PROCEDURES

No employee, agent, or contract employee of this air carrier, unless trained in this function, may load or transport aboard an aircraft any DG/HM unless the shipment has met acceptance and packaging requirements, and the Pilot-In-Command notification has been completed (See 49 CFR 175.30 and 175.33).

Packages, overpacks, and ULD's containing DG/HM must be inspected for damage or leakage after being unloaded from the aircraft. Any evidence of leakage or damage requires further inspection of aircraft where material was stored (See 49 CFR 175.90).

For stowage on an aircraft, in a cargo facility, or at any other area at an airport designated for the stowage of DG/HM, packages containing DG/HM which might react dangerously with one another may not be placed next to each other or in a position that would allow a dangerous interaction in the event of leakage. At a minimum, the segregation instructions prescribed in the Segregation Table below (Section III.A.) **must** be followed to maintain acceptable segregation between packages containing DG/HM with different hazards. The Segregation Table instructions apply whether or not the class or division is the primary or subsidiary risk. (See 49 CFR 175.78).

A. SEGREGATION TABLE

Class or Division

Hazard Label	1	2	3	4.2	4.3	5.1	5.2	8
1	Note 1	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
2	Note 2	----	----	----	----	----	----	----
3	Note 2	----	----	----	----	X	----	----
4.2	Note 2	----	----	----	----	X	----	----
4.3	Note 2	----	----	----	----	----	----	X
5.1	Note 2	----	X	X	----	----	----	----
5.2	Note 2	----	----	----	----	----	----	----
8	Note 2	----	----	----	X	----	----	----

Section 175.78(c) Instructions for using the Segregation Table are as follows:

- (1) The dots at the intersection of a row and column indicate that no restrictions apply.
- (2) The letter "X" at the intersection of a row and column indicates that packages containing these classes of hazardous materials may not be stowed next to or in contact with each other, or in a position which would allow interaction in the event of leakage of the contents.
- (3) Note 1. "Note 1" at the intersection of a row and column means the following:
 - (i) For explosives in compatibility groups A through K and N –

- (A) Packages bearing the same compatibility group letter and the same division number may be stowed together.
- (B) Explosives of the same compatibility group, but different divisions may be stowed together provided the whole shipment is treated as belonging to the division having the smaller number. However, when explosives of Division 1.5 Compatibility Group D, are stowed together with explosives of Division 1.2 Compatibility Group D, the whole shipment must be treated as Division 1.1, Compatibility Group D.
- (C) Packages bearing different compatibility group letters may not be stowed together whether or not they belong to the same division, except as provided in paragraphs (c)(3)(ii) and (iii) of this section.
- (ii) Explosives in Compatibility Group L may not be stowed with explosives in other compatibility groups. They may only be stowed with the same type of explosives in Compatibility Group L.
- (iii) Explosives of Division 1.4, Compatibility Group S, may be stowed with explosives of all compatibility groups except for Compatibility Groups A and L.
- (iv) Other than explosives of Division 1.4, Compatibility Group S (see paragraph (c)(3)(iii) of this section), and Compatibility Groups C, D and E that may be stowed together, explosives that do not belong in the same compatibility group may not be stowed together.
- (A) Any combination of substances in Compatibility Groups C and D must be assigned to the most appropriate compatibility group shown in Sec. 172.101 Table of this subchapter.
- (B) Explosives in Compatibility Group N may be stowed together with explosives in Compatibility Groups C, D or E when the combination is assigned Compatibility Group D.
- (4) Note 2. "Note 2" at the intersection of a row and column means that other than explosives of Division 1.4, Compatibility Group S, explosives may not be stowed together with that class.
- (5) Packages containing hazardous materials with multiple hazards in the class or divisions, which require segregation in accordance with the Segregation Table need not be segregated from other packages bearing the same UN number.
- (6) A package labeled "BLASTING AGENT" may not be stowed next to or in a position that will allow contact with a package of special fireworks or railway torpedoes.

Poisons: Packages bearing the poison/toxic or infectious substance label may not be stowed in a ground facility or transported in the same compartment of an aircraft with material known to be foodstuffs, feed, or any other edible material intended for consumption by humans or animals unless loaded in separate ULD's which are not adjacent to each other.

Radioactive Materials (RAM): While in transport or storage, no more than 50.0 Transport Index (TI) of RAM may be stored in any one group of packages. Any group of packages containing 50.0 TI must be separated from any other package or group of packages containing RAM by a distance of 20 feet. No package or group of packages may be placed in a position that is closer to that position which may be continuously

occupied by people or animals or to undeveloped film than the distances shown in the charts in 49 CFR 175.701 or 175.703, or as permitted by 49 CFR 175.702(b) for groups of packages.

B. PRE-BOARD INSPECTION

General Inspection - No employee, agent, or contract employee shall load any package, outside container, or overpack containing DG/HM aboard an aircraft, into a freight container, or onto a pallet prior to loading it aboard an aircraft unless immediately before doing so that person has inspected the exterior of the package, outside container, or overpack and determined that it has no holes, leakage, or other obvious indications that its integrity has been compromised. The pre-board inspection is not required for shipments of dry ice (CO₂ solid), magnetized materials, or freight containers of ORM-D AIR materials packaged by, and offered by, a single shipper. A ULD may not be loaded unless the device has been inspected and found to be free from any evidence of leakage or damage to any package containing DG/HM.

Aircraft Quantity Limitations - Except for RAM, Class 9, and ORM-D packages, no more than 25Kg (55 pounds) net weight of DG/HM and/or 75Kg (165 pounds) of “non-flammable compressed gas” permitted to be carried aboard passenger-carrying aircraft may be carried in:

1. Passenger Aircraft
 - a) Each inaccessible cargo compartment
 - b) Each freight container within an access cargo compartment
2. Cargo Only Aircraft
 - a) Same as 1.a) and 1.b)
 - b) An inaccessible manner within an accessible cargo compartment

There are some exceptions for cargo-only flights provided in 49 CFR 175.85.

Orientation and Securing of DG/HM Packages - A package containing DG/HM marked or labeled to indicate proper orientation will be loaded and secured in accordance with such markings or labels. Liquid DG/HM without such markings will be loaded and secured with closures up. DG/HM packages will be secured to prevent any movement in flight that would result in damage to or change in orientation of the packages (See 49 CFR 175.79 and 175.81).

Location of DG/HM Packages - No DG/HM package may be carried in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft. DG/HM may be carried in a main deck cargo compartment of a passenger aircraft provided that the compartment is inaccessible to passengers and that it meets all certification requirements for a Class B aircraft cargo compartment in 14 CFR 25.857(b) or for a Class C aircraft cargo compartment in 14 CFR 25.857(c). See CFR 175.85.

Radioactive Materials (RAM) Inspection - Each package containing labeled RAM must also be inspected to insure that the security seal is not broken. This requirement does not apply to packages of RAM that are overpacked.

RAM Limitations - No more than 50.0 TI total may be carried on a passenger carrying aircraft. For cargo-only carrying aircraft 200.00 TI is allowable. Separation distances and other requirements are found in 49 CFR 175.700-703.

Passenger Aircraft - In addition to any other requirement, packages requiring a radioactive yellow II or III label must meet the following loading requirements:

- 1) The radioactive material must be intended for use in, or incident to, research or medical diagnosis or treatment as indicated by the shipper's certification required by 49 CFR 172.204(c)(4).
- 2) No single package carried by a passenger carrying aircraft may exceed the TI indicated for the category of label listed below:
 - Radioactive Yellow II Label: 1.0 TI
 - Radioactive Yellow III Label: 3.0 TI
- 3) Each package must be loaded and carried on the aircraft in accordance with the separation distance specified in 49 CFR 175.701(b) and 175.703(a) and be "suitably safeguarded" and secured so as to prevent becoming a hazard by shifting or moving.

Cargo-Only Aircraft - In addition to any other requirement, packages requiring a radioactive yellow II or III label must meet the following loading requirements:

- 1) No single package carried on a cargo-only aircraft may exceed the TI indicated for the category of label below:
 - Radioactive Yellow II Label: 1.0 TI
 - Radioactive Yellow III Label: 10.0 TI
- 2) The total TI of all of the packages loaded on the aircraft does not exceed 200.00 and each package is loaded and carried on the aircraft in accordance with the separation distance or pre-designated area requirements of 49 CFR 175.701 and "suitably safeguarded" and secured so as to prevent it from becoming a hazard by shifting or moving.
- 3) If the total TI for all of the packages exceeds 50 TI, the following criteria must be met:
 - a) The separation distance between the surfaces of the RAM packages and the surfaces bounding the space occupied by persons is at least 30 feet. The separation distance between the surfaces of the RAM packages and the surfaces bounding the space occupied by animals at least 0.5 meters

(20 inches) for journeys not exceeding 24 hours and at least 1.0 meters (39 inches) for journeys longer than 24 hours.

b) The TI for any group of packages does not exceed 50.0 and each group is separated by at least 20 feet from any other as measured from the outer surface of each group.

c) For purposes of this paragraph, the term “group of packages” means packages that are separated from each other in aircraft by a distance of 20 feet or less.

d) The total criticality safety index for all of the packages does not exceed 50.0 unless under exclusive use. (See 49 CFR 175.702(b))

4) Aircraft used routinely for the carriage of Class 7 (radioactive) materials shall be periodically checked for radioactive contamination. If the level of contamination exceeds 0.5 millirem per hour the aircraft must be taken out of service and may not again be placed in service or routinely occupied until the radiation dose rate at any accessible surface is less than 0.5 millirem per hour and there is no significant removable radioactive surface contamination.

IV. PILOT-IN-COMMAND NOTIFICATION

The Pilot-In-Command (PIC) must be given accurate and legibly written information as early as practicable before departure regarding the DG/HM proper shipping name, hazard class, identification number, packing group, total packages, and net quantity or gross weight for each DG/HM, location aboard the aircraft, confirmation that no damage or leaking packages have been loaded. For RAM, the number of packages, overpacks, or ULD's/freight containers, category, transport index (if applicable), and their location aboard the aircraft are required. (See 49 CFR 175.33).

Effective April 1, 2005, the date of the flight must be listed and the telephone number of a person not aboard the aircraft from whom the information contained in the notification of the PIC can be obtained must be included on the notification unless the number is in a location in the cockpit that is available and known to the flight crew. (See 49 CFR 175.33(a)(7-8))

Also effective April 1, 2005, aircraft operators must retain at the airport of departure or the operator's principal place of business a copy of each notification of pilot-in-command for 90 days. Aircraft operators must have this information readily accessible at the airport of departure and the intended airport of arrival for the duration of the flight leg and make this information immediately available to any representative of a Federal, State or local government agency who is responding to an incident involving the flight. (See 49 CFR 175.33(c-d))

If the PIC loads the aircraft, that individual must perform the pre-board inspection required. If someone other than the PIC loads the aircraft and conducts the pre-board inspection, that person shall provide the PIC with written notification. A copy of the PIC notification must be readily available to the PIC during flight.

Emergency response information concerning DG/HM on board must be available to the PIC (See 49 CFR 172.602 (c)(1)).

V. SPECIAL FLIGHTS/EXEMPTIONS

The transportation of flammable liquid fuel in small, passenger-carrying aircraft is authorized only when the provisions of 49 CFR 175.310 are met.

DG/HM listed in 49 CFR 175.320 is authorized for air transportation when cargo-only aircraft is the only means of transportation available. In addition, all other conditions of this section must be followed.

Flights made under the provisions of a DOT exemption or approval must comply with the conditions specified in the exemption or approval.

Any approved exemption or approval for this air carrier shall be retained as an Appendix to this manual.

VI. DG/HM EXCEPTIONS

Certain materials that are normally regulated as DG/HM are excepted from the HMR. They are set forth in **Appendix E, DG/HM Exceptions** of this manual and 49 CFR 175.10.

VII. ACCEPTANCE OF WHEELCHAIRS/MOBILITY AIDS

This air carrier will accept battery-powered wheelchairs/mobility aids as baggage. Wheelchairs/mobility aids will **NOT** be transported if it exhibits evidence of previous leakage or damage.

Wheelchair batteries are either “spillable” or “non-spillable.” A non-spillable battery will normally be labeled as such. In the absence of a label, a battery whose caps or cover cannot be removed is considered to be non-spillable; if the caps or cover can be removed, it is considered to be spillable.

Wheelchairs/mobility aids **non-spillable** batteries may be accepted for carriage with the battery attached when properly prepared for shipment (the battery is disconnected and terminals and ends of cables are insulated to prevent short circuits). Batteries manufactured after September 30, 1995, must be marked on the outside of the battery case, “NON-SPILLABLE” or “NON-SPILLABLE BATTERY.” If the wheelchair cannot be loaded/stowed in an upright position, it is advisable that the battery is disconnected and terminals are insulated to prevent short circuits.

If this requirement cannot be met, the battery **must** be removed from the housing by qualified airline personnel only, and transported in strong, rigid packaging under the following conditions:

- The packaging must be leak-tight and impervious to battery fluid. An inner liner may be used to satisfy this requirement if there is absorbent material placed inside of the liner and the liner has a leakproof closure;
- The battery must be protected against short circuits, secured upright in the packaging, and be packaged with enough compatible absorbent material to completely absorb liquid contents in the event of rupture of the battery; and
- The packaging must be labeled with a CORROSIVE label, marked to indicate proper orientation, and marked with the words "Battery, wet, with wheelchair;" and
- The PIC must be advised either orally or in writing prior to departure as to the location of the spillable battery aboard the aircraft.

VIII. NOTIFICATION OF DG/HM INCIDENTS, DISCREPANCIES AND REQUIRED REPORTS

A. Reporting of Incidents (See 49 CFR 171.15)

1) This Air Carrier will, as soon as practical but no later than 12 hours after the occurrence of any reportable incident, provide notice by telephone to the National Response Center (NRC) at 800-424-8802 (toll free) or 202-267-2675 or electronically at <http://hazmat.dot.gov/spills.htm>. Notice involving an infectious substance may be given to the Director, Centers for Disease Control and Prevention at 800-232-0124 (toll free) in place of the notice to the NRC. This includes incidents that occur during the course of transportation (including loading, unloading, or temporary storage) in which:

- a) A person is killed; or
- b) A person receives injuries requiring hospitalization; or
- c) An evacuation of the general public occurs lasting one or more hours; or
- d) One or more major transportation arteries or facilities are closed or shut down for one hour or more; or
- e) The operational flight pattern or routine of an aircraft is altered; or
- f) Fire, breakage, spillage, or suspected radioactive contamination occurs involving shipment of RAM; or
- g) Fire, breakage, spillage, or suspected contamination occurs involving shipment of infectious substances (etiologic agents); or
- h) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident that, in the judgment of the carrier, it should be reported to the NRC even though it does not meet the criteria of paragraph 1)(a) thru (g) of this section.

2) Radioactive Materials (RAM) - In addition to the notification to the NRC, this air carrier will also make a telephone notification to the shipper of the RAM involved in the incident.

- 3) Filing an Incident Report (See 49 CFR 171.16) This air carrier shall report in writing, on DOT Form F 5800.1 (01-2004), within 30 days of the date of discovery, each incident that occurs during the course of transportation (including loading, unloading, or storage, incidental thereto) in which any of the circumstances set forth in 49 CFR 171.15(b) occurs, there has been an unintentional release of hazardous materials from a package or quantity of hazardous waste has been discharged during transportation, or undeclared hazardous materials are found in cargo or baggage. ***Exception: Undeclared hazardous materials discovered in baggage during the airport screening process are not subject to Section VIII.A of this manual (See 49 CFR 171.16(d)(3)). Such items in baggage must be reported as a discrepancy in accordance with Section VIII.B of this manual. (See 49 CFR 175.31)***

A copy of DOT Form F 5800.1 (01-2004) will be forwarded to:

- a) Information Systems Manager, DHM-63
Research and Special Programs Administration
Department of Transportation
Washington, DC 20590-0001

and,

- b) The nearest FAA Security Office in the region of discovery.

Instructions for completing DOT Form F 5800.1 (01-2004) are included in **Appendix F**.

B. Reporting of Discrepancies (See 49 CFR 175.31)

- 1) In the event of a discrepancy relative to the shipment of hazardous material following its acceptance for transportation aboard an aircraft, this air carrier shall, as soon as practicable, notify the nearest FAA Security Office, by telephone or electronically, and shall provide the following information:
 - a. Name and Telephone number of the person reporting the discrepancy.
 - b. Name of the aircraft operator.
 - c. Specific location of the shipment concerned.
 - d. Name of the shipper.
 - e. Nature of discrepancy.
- 2) Packages or baggage which are found to contain hazardous materials subsequent to their being offered and accepted as other than hazardous materials (undeclared) must be reported.
- 3) Discrepancies involving hazardous materials which are improperly described, certified, labeled, marked, or packaged, in a manner not ascertainable when accepted under 175.30(a), must be reported.

EMERGENCY RESPONSE CONTACTS - RECOMMENDED LIST

NOTE: These contact numbers are not required at the time of program submission to the FAA and should be tailored to each station location.

CONTACTPHONE NUMBER

Local FAA Security Office

FAA Regional Operations Center (24-hour contact)

FAA Flight Standards District Office (FSDO)
(Holding FAA Certificate)

Airport Police

Fire Department

Ambulance/Hospital

Center for Disease Control

1-800-232-0124

CHEMTREC

1-800-424-9300

State Department of Emergency Services

Disposal of Hazardous Materials
(Residue of spill, cleanup, etc.)

National Response Center (NRC)

1-800-424-8802

For Radioactive Materials:

Department of Energy (DOE)

202-586-8100

Nuclear Regulatory Commission

301-816-5100

State Radiation Control

PART TWO

DANGEROUS GOODS TRAINING

I. REQUIREMENTS

This air carrier shall not use any person to perform any assigned duties or responsibilities for acceptance, handling, storage, and/pr transportation of DG/HM cargo, baggage, and DG/HM COMAT unless the individual has satisfactorily completed an initial course of study and an oral or written test regarding DG/HM. All incorrect answers shall be reviewed with the trainee until proficiency is achieved.

In addition, within the preceding 12 calendar months, the individual must have received either initial training or annual recurrent training and satisfactorily completed an oral or written test. All incorrect answers shall be reviewed with the trainee until proficiency is achieved.

This air carrier shall maintain a record of the satisfactory completion of the initial and recurrent training for each individual. These records will be available at the location where the personnel perform such duties, and will be maintained for as long as the employee is performing DG/HM duties and for 90 days thereafter.

A. TRAINING REFERENCE TABLE

At a minimum, training in the subject matter relating to DG/HM transport will be provided to the various categories of personnel as indicated below:

MODULE	AREA OF TRAINING	CATEGORY OF PERSONNEL (see key below)				
		1	2	3	4	5
1	General Awareness/Familiarization	X	X	X	X	X
2	Hidden Dangerous Goods	X	X	X	X	X
3	Company Materials (COMAT)	X	X	X	X	X
4	Documentation	X	X		X	
5	Acceptance & Handling	X	X		X	
6	Marking & Labeling	X	X	X	X	X
7	Classification	X	X	X	X	X
8	Identification	X	X		X	
9	Packing	X	X			
10	Notification to Pilot-In-Command	X	X		X	X
11	Safety & Reporting	X	X	X	X	X
12	Security	X	X	X	X	X
13	Dangerous Goods Exceptions	X	X	X	X	X
14	Testing	X	X	X	X	X
SEE NOTE	Recommended Training Time - Initial	8 hours	6 hours	1 hour	2 hours	1 hour
SEE NOTE	Recommended Training Time- Recurrent	2 hours	2 hours	1 hour	2 hours	1 hour

KEY:

- 1 - Personnel engaged in the acceptance of DG/HM shipments.
- 2 - Maintenance, stores, and other personnel engaged in ground handling, storage, and loading/unloading of DG/HM.
- 3 - Personnel engaged in passenger and baggage check-in procedures (i.e., Skycaps, ticket counter agents, etc.).
- 4 - Flight crew members.
- 5 - Flight attendants and dispatchers.

NOTE: The extent of training varies for each personnel category depending on the responsibility of the position (e.g., Flight crew members will receive a general overview of the marking and labeling requirements, while an individual who is engaged in the actual acceptance of DG/HM will receive more detailed instructions). **The material shall be covered in such scope and depth as to provide all persons with sufficient knowledge of applicable regulations and procedures to safely accomplish their specific duties.**

II. TRAINING CURRICULUM

The modules listed below will be covered during the initial and recurrent training of this air carrier's personnel. This training will be considered to comply with all requirements for the acceptance, handling, and transportation of DG/HM as specified in 49 CFR and/or the ICAO Technical Instructions. This air carrier will ensure that all materials and regulations used in its training curriculum are current and valid at the time of the training.

Module 1 - General Awareness/Familiarization

Applicable Regulatory Materials
 Overview of 49 CFR Parts 100-185
 Use of ICAO Technical Instructions ~ 49 CFR 171.11
 Use of IATA Dangerous Goods Regulations
 Definitions Used in Air Transportation of Hazardous Materials ~ 49 CFR 171.8
 General Transportation Requirements ~ 49 CFR 171.2
 Carriage by Aircraft ~ 49 CFR Part 175
 Training Requirements and Recordkeeping ~ 49 CFR 172.700
 Enforcement

Module 2 - Hidden Dangerous Goods

Hidden Shipment Indicators ~ Appendix A
 Suspicious Cargo and Baggage Awareness

Module 3 ~ Company Materials (COMAT)

Identify and Recognize DG COMAT

- Hazardous Materials Onboard Aircraft ~ Appendix D
- Replacement Components
- Consumable Materials

Specific DG COMAT Exceptions ~ 49 CFR 175.10(a)(2)

Facility Storage, Safe Movement and Handling Requirements for DG COMAT ~ 49 CFR 175.78

- Specific Hazards and Precautionary Measures
- Proper Disposal Procedures for DG COMAT
- Environmental Precautions
- Transportation Precautions

Module 4 - Documentation

Shipper's Certification Requirements for Hazardous Materials ~ 49 CFR 172.204

Shipping Paper Requirements ~ 49 CFR 172.200 and 172.201

Description of Hazardous Materials Required on Shipping Papers ~ 49 CFR 172.202 and 172.203

Shipping Papers for Hazardous Materials aboard Aircraft ~ 49 CFR 175.35

Module 5 - Acceptance & Handling

Passenger and Cargo Information Signage Requirements ~ 49 CFR 175.25 and 175.26

Acceptance Procedures and Requirements for DG/HM ~ 49 CFR 171.2(a), 175.3, and 175.30

Unit Load Device and Package Inspection ~ 49 CFR 175.88

Quantity Limitations aboard Aircraft ~ 49 CFR 175.75 and 175.85

Stowage Compatibility ~ 49 CFR 175.78

Orientation of Packages ~ 49 CFR 175.79

Securing Packages ~ 49 CFR 175.81

Location of Packages ~ 49 CFR 175.85

Damages Shipments of Hazardous Materials ~ 49 CFR 175.90

Module 6 - Marking & Labeling

Markings Required on Packages Containing Hazardous Materials ~ 49 CFR Subpart D

Labels Required on Packages Containing Hazardous Materials ~ 49 CFR Subpart E

Keeping and Replacement of Hazardous Materials Labels ~ 49 CFR 175.40

Module 7 - Classification

Hazardous Materials Classification ~ 49 CFR 172.101, 173.2, and 173.2(a)

Unacceptable Hazardous Materials ~ 49 CFR 172.101, 173.21, and 175.3

Modules 8 - Identification

Purpose and Use of the Hazardous Materials Tables ~ 49 CFR 172.101

Proper Shipping Names ~ 49 CFR 172.101 and 172.202

Hazard Class (Definitions) ~ 49 CFR 172.101 and 173.50 - 173.144

UN/ID Numbers ~ 49 CFR 172.101 and 172.202

Packing Group ~ 49 CFR 172.101 and 172.202

Module 9 - Packing

Shippers Responsibilities ~ 49 CFR 171.2(a) and 171.12
General Packing Requirements ~ 49 CFR 173.24, 173.24(a), and 173.27
Packing Instructions and Assignments ~ 49 CFR 172.101 and Part 173
Small Quantity Exceptions ~ 49 CFR 173.4
Limited Quantity Exceptions ~ 49 CFR 173.150 – 173.156

Module 10 - Notification to Pilot-In-Command

Notification to Pilot-In-Command ~ 49 CFR 175.33 and 175.35
Emergency Response Information ~ 49 CFR Subpart G

Module 11 - Safety & Reporting

Emergency Response Information ~ 49 CFR 172.600
Hazardous Materials Discrepancy/Incident Reporting ~ 49 CFR 171.15,
171.16, 175.31, and Appendix F

Module 12 – Security

Security Awareness ~ 49 CFR 172.704(a)(2)
In-depth Security Plan (if applicable) ~ 49 CFR 172.800

Module 13 - Dangerous Goods Exceptions

Exceptions ~ 49 CFR 175.10

Module 14 - Testing ~ 49 CFR 172.702(d) and 49 CFR 172.704(d)

APPENDIX A**HIDDEN SHIPMENT INDICATORS**

Cargo and baggage that are offered to an air carrier under a general description might have hazards that are not apparent. The Hazardous Materials Table in 49 CFR Part 172 is not complete, and shippers and passengers may not be aware of this. Some of these consignments have caused incidents that could have seriously endangered the safety of the aircraft and/or its passengers.

Air carrier personnel should be alert to these possible hazards. Items found containing a hazardous material need to be shipped in accordance with the 49 CFR/ICAO Technical Instructions.

NAME	REMARKS
Aircraft Parts/COMAT	May indicate the presence of chemical oxygen generators, flammable liquids/solids, corrosives, compressed gases, radioactive materials in aircraft parts and accessories, or general company materials.
Automobile Parts (car, motor, motorcycle)	May contain cellulose paints, wet batteries, shocks/struts with nitrogen, air bag inflators/air bag modules, etc.
Breathing Apparatus/SCUBA	May indicate compressed air or oxygen cylinders
Bull (or other animal) Semen	May involve use of refrigerant (e.g., Liquid Nitrogen)
Camping Equipment	May contain flammable liquids, gas, or solids
Chemicals	Often found to be hazardous
Cryogenic (Liquid)	Indicates low temperature, low pressure, or non-pressurized gas such as Argon, Helium, Neon, and Nitrogen
Cylinders	May indicate compressed gas
Dental Apparatus	May contain hazardous chemicals such as resins or solvents
Electrical Equipment	May contain magnetized materials or mercury in switch gear and electron tubes
Electrically Powered	May contain wet batteries apparatus (wheelchairs, lawn mowers, golf carts, etc.)
Frozen Fruits, Vegetables	May be packed in Dry Ice (Solid Carbon Dioxide)
Household Goods	May contain hazardous materials such as paint, aerosols, bleaching powder, etc.
Instruments	May conceal barometers, manometers, mercury switches, rectifier tubes, thermometers containing mercury
Laboratory/Testing	May contain various hazardous chemicals
Machinery Parts	May include hazardous chemicals (adhesives, paints,

	sealants, solvents, etc.)
Medical Supplies/Equipment (Test Kits)	May contain various hazardous chemicals
Pharmaceuticals	May contain various hazardous chemicals
Photo Supplies	May contain various hazardous chemicals
Refrigerators	May contain various hazardous chemicals
Repair Kits	May contain various hazardous materials (adhesives, solvents, cellulose paints, organic peroxides, etc.)
Samples for Testing	May contain various hazardous materials (including infectious substances)
Swimming Pool Supplies	May contain acid, chlorine
Switches in Electrical Equipment or Instrument	May contain mercury
Tear Gas Dispensers	Contains irritating material or pepper gas which is forbidden on passenger aircraft
Toys	May be made of celluloid or other flammable material
Tool Boxes	May contain Flammable gases, liquids, adhesives, Cleaners, Corrosives, Oxidizers, etc.
Vaccines	May be packed in Dry Ice (Solid Carbon Dioxide)

Note 1: Articles which do not fall within the hazardous materials definitions of 49 CFR and which, in the event of leakage, may cause serious cleanup problems or corrosion to aluminum on a long term basis, must be checked by the shipper to at least ensure that the packaging is adequate to prevent leakage during transportation. These may include brine, powered or liquid dyes, pickled foodstuffs, etc.

Note 2: Magnetized material, as defined in 49 CFR, with a gauss reading of more than 0.00525 is forbidden for air transportation and a package with a reading of 0.00525 or less is not regulated. The ICAO and IATA Regulations regulate magnetized material with a reading between 0.002 gauss and 0.00525 gauss, thus requiring a magnetized material label.

APPENDIX B
Non-Radioactive

ACCEPTANCE CHECKLIST Non-Radioactive

**APPENDIX B APPLIES IF THE OPERATOR ELECTS TO
ACCEPT AND TRANSPORT HAZARDOUS MATERIALS USING
THE INTERNATIONAL CIVIL AVIATION ORGANIZATION'S
"TECHNICAL INSTRUCTIONS" IN ADDITION TO 49 CFR
HAZARDOUS MATERIALS REGULATIONS**

APPENDIX B

DANGEROUS GOODS CHECKLIST FOR A NON-RADIOACTIVE SHIPMENT

The recommended check list appearing on the following pages is intended to verify shipments at origin. Never accept or refuse a shipment before all items have been checked.

Is the following information correct for each entry?

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A		YES	NO*	N/A
1. Two copies in English format	<input type="checkbox"/>	<input type="checkbox"/>		18. Overpack			
2. Full name and address of Shipper	<input type="checkbox"/>	<input type="checkbox"/>		- Indication "Overpack used"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Full name and address of Consignee	<input type="checkbox"/>	<input type="checkbox"/>		- Compatible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Name and telephone number of a person responsible for Division 6.2 Infectious Substance shipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- Multi-overpack marks and quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If the Air Waybill is not shown, enter it	<input type="checkbox"/>	<input type="checkbox"/>					
6. The number of pages shown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
7. If full name of Airport or City of Departure or Destination is not shown, enter it	<input type="checkbox"/>	<input type="checkbox"/>					
8. The non-applicable Aircraft Type deleted	<input type="checkbox"/>	<input type="checkbox"/>					
9. The word "Radioactive" deleted	<input type="checkbox"/>	<input type="checkbox"/>					

Identification

10. Proper Shipping Name and the technical name in parentheses for asterisked entries	<input type="checkbox"/>	<input type="checkbox"/>	
11. Class or Division, and for Class 1, the Compatibility Group	<input type="checkbox"/>	<input type="checkbox"/>	
12. UN or ID Number, preceded by prefix	<input type="checkbox"/>	<input type="checkbox"/>	
13. Packing Group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Subsidiary Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Quantity and Type of Packing

15. Number and Type of Packages	<input type="checkbox"/>	<input type="checkbox"/>	
16. Quantity and unit of measure (net or gross, as applicable) per package	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. If different dangerous goods are packed in one outer packaging, are the following rules applied:			
- Compatible (note exception for chemical kits/first aid kits. See packing Instruction 915 and Y915)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- For UN packages containing Division 6.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- "All packed in one (type of packaging)"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Calculation of "Q" value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Packing Instructions

19. Packing Instruction Number	<input type="checkbox"/>	<input type="checkbox"/>
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Authorizations

20. Indication of "Limited Quantity" or "Ltd. Qty." if "Y" packing instruction used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. The Special Provision Number if A1, A2 A51, A81, or A109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Indication that governmental authorization is attached, including a copy in English	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Additional approvals as needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Handling Information

24. For self-reactive and related substances of Division 4.1 and organic peroxides of Division 5.2, or samples thereof, is the mandatory statement shown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Shipper's certification for air transport	<input type="checkbox"/>	<input type="checkbox"/>	
26. Name and Title of Signatory, Place and Date indicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Signature of Shipper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Amendment or alteration signed by Shipper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Air Waybill

29. The Handling Information box shows: "Dangerous goods as per attached Shipper's Declaration" or Dangerous Goods as per attached DGD"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30 "Cargo Aircraft Only" or "CAO", if applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Package(s) and Overpacks	YES	NO*	N/A		YES	NO*	N/A
31. Packaging conforms with packing instructions and is undamaged	<input type="checkbox"/>	<input type="checkbox"/>		43.. The Subsidiary Hazard Labels must show the Class or Division number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Same number and type of packagings and overpacks delivered as shown on DGD and is undamaged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	44. Cargo Aircraft Only label, adjacent to Hazard label(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				45. "Orientation" labels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				46. For Magnetized Material, the Handling label	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				47. "Cryogenic Liquid" labels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				48. "Keep Away From Heat" label if required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				49. All above labels correctly affixed and have all irrelevant marks and labels been removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Markings

33. For UN Specification Packaging, are they marked			
- Symbol and Specification Code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- X, Y, Z, agreed with Packing Group/ Packing Instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Maximum Gross Weight not exceeded (solids or inner packagings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Infectious substance package marking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. The Proper Shipping Name(s) including technical name where required, and the UN or ID Number(s)	<input type="checkbox"/>	<input type="checkbox"/>	
35. The full name(s) and Address(es) of Shipper and Consignee	<input type="checkbox"/>	<input type="checkbox"/>	
36. The Net Quantity of Explosives and Gross Weight of the package for Class 1 items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. The Name and telephone Number of a person responsible for Division 6.2 Infectious Substances shipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. The Special Marking requirements shown for Packing Instruction 202	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. In the case of Carbon Dioxide, Solid (Dry Ice), the Net Weight marked on the Package	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. For Limited Quantity packagings: "Limited Quantity" or "LTD. QTY."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. For Salvage Packagings: "Salvage"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Labeling

42. The Primary Risk Label(s), with Class or Division Number affixed to each package	<input type="checkbox"/>	<input type="checkbox"/>
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Comments:

Checked by:

Place:

Signature:

Date:

Time:

*IF ANY QUESTION IS ANSWERED WITH A "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

APPENDIX B (cont'd)
Radioactive

ACCEPTANCE CHECKLIST Radioactive

**APPENDIX B APPLIES IF THE OPERATOR ELECTS TO
ACCEPT AND TRANSPORT HAZARDOUS MATERIALS USING
THE INTERNATIONAL CIVIL AVIATION ORGANIZATION'S
"TECHNICAL INSTRUCTIONS" IN ADDITION TO 49 CFR
HAZARDOUS MATERIALS REGULATIONS**

APPENDIX B (cont'd)**DANGEROUS GOODS CHECKLIST FOR A RADIOACTIVE SHIPMENT**

The recommended check list appearing on the following pages is intended to verify shipments at origin. Never accept or refuse a shipment before all items have been checked. **Is the following information correct for each entry?**

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A		YES	NO*	N/A	
1. Two copies in English format	<input type="checkbox"/>	<input type="checkbox"/>		Packing Instructions				
2. Full name and address of Shipper	<input type="checkbox"/>	<input type="checkbox"/>			20. Category of package(s) or overpack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Full name and address of Consignee	<input type="checkbox"/>	<input type="checkbox"/>			21. Transport Index and dimensions for Category II and Category III only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. If the Air Waybill is not shown, enter it	<input type="checkbox"/>	<input type="checkbox"/>			22. For Fissile Material the Criticality Safety Index	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The number of pages shown	<input type="checkbox"/>	<input type="checkbox"/>			23. "Fissile Excepted"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The non-applicable Aircraft Type deleted	<input type="checkbox"/>	<input type="checkbox"/>						
7. If full name of Airport or City of Departure Destination is not shown, enter it	<input type="checkbox"/>	<input type="checkbox"/>						
8. The word "Non-Radioactive" deleted	<input type="checkbox"/>	<input type="checkbox"/>						

Identification

9. Proper Shipping Name	<input type="checkbox"/>	<input type="checkbox"/>	
10. Class 7	<input type="checkbox"/>	<input type="checkbox"/>	
11. UN Number, preceded by prefix	<input type="checkbox"/>	<input type="checkbox"/>	
12. Packing Group if required for Subsidiary Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Subsidiary Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Quantity and Type of Packing

14. Name or Symbol of Radionuclide(s)	<input type="checkbox"/>	<input type="checkbox"/>	
15. A description of the physical and Chemical form, or Special Form, or low dispersible material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The number and type of packages and the activity in Becquerels in each package, or for Fissile Material the total weight in grams or kilograms of fissile material may be shown in place of activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. For different individual radionuclides, the activity of each radionuclide and the words "All packed in one"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Activity within limits for Type A packages, Type B, or Type C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Words "overpack used" shown on DGD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authorizations

24. Identification marks shown and a copy of the document in English attached to DGD for the following	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Special Form approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Low dispersible material approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Type B package design approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Type B (M) package shipment approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Type C package design and shipment approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Fissile material package design and shipment approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Special Arrangement shipment approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Additional Handling Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Shipper's certification for air transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Name and Title of Signatory, Place, and Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Signature of Shipper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Amendment or alteration signed by	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Air Waybill

30. The Handling Information box shows: "Dangerous goods as per attached Shipper's Declaration" or "Dangerous Goods as per attached DGD"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Cargo Aircraft Only or CAO if applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	YES	NO*	N/A		YES	NO*	N/A
Package(s) and Overpacks							
32. Number and type of packagings and overpacks delivered as shown on DGD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	44. Two Cargo Aircraft Only labels, if required, adjacent to the Hazards labels to the Radioactive labels completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Unbroken transportation seal and package in proper condition for carriage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45. For fissile materials, two correctly completed Criticality Safety Index (CSI) labels on opposite sides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Markings				46. All labels correctly affixed and irrelevant marks and labels removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. For Industrial packages, are they marked appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For Overpacks			
35. For Type A packages are they marked appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47. If specification markings are not visible, other authorized indication marked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. For Type B packages, are they marked appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48. Information on the Contents and Activity appears on the radioactive label (totalled) or for overpacks containing packages of different radionuclides, this information may be replaced by the statement " See Shipper's Declaration"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. For Type C packages, are they marked appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	49. Packaging markings as required must be clearly visible or reproduced on the outside of the overpack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. For Fissile material, are they marked appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	General			
39. The Proper Shipping Name and UN Number	<input type="checkbox"/>	<input type="checkbox"/>		50. State and Operator variations complied with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. The full Name and Address of the Shipper and Consignee	<input type="checkbox"/>	<input type="checkbox"/>		51. For Cargo Aircraft Only shipments, a cargo aircraft operates on all sectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. The permissible gross weight if it exceeds 50 kg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52.. For packages containing Cargo Dioxide Solid (dry ice), have the marking, labeling and documentary requirements been applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labeling							
42. Two correctly completed Radioactive labels on opposite sides	<input type="checkbox"/>	<input type="checkbox"/>					
43. Applicable Subsidiary Hazard labels adjacent to the Radioactive label completed	<input type="checkbox"/>	<input type="checkbox"/>					

Comments:

 Checked by:

Place:

Signature:

Date:

Time:

 *IF ANY QUESTION IS ANSWERED WITH A "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

APPENDIX C

DOT CHART
Hazardous Materials Marking,
Labeling & Placarding Guide

SEE ATTACHED



U.S. Department
of Transportation
Research and
Special Programs
Administration

DOT CHART 12

Hazardous Materials Marking, Labeling & Placarding Guide



Refer to 49 CFR, Part 172:

Marking - Subpart D

Labeling - Subpart E

Placarding - Subpart F

Emergency Response - Subpart G

NOTE:

This document is for general guidance only and must not be used to determine compliance with 49 CFR, Parts 100-185.

Hazardous Materials Warning Labels

Actual label size: 100 mm (3.9 inches) on all sides

CLASS 1 Explosives: Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6



CLASS 2 Gases: Divisions 2.1, 2.2, 2.3



CLASS 3 Flammable Liquid



CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet: Divisions 4.1, 4.2, 4.3



CLASS 5 Oxidizer, Organic Peroxide: Divisions 5.1 and 5.2



§172.411

* Include compatibility group letter.

** Include division number and compatibility group letter.

§172.415, §172.416, §172.417, §172.405(b)

§172.419

§172.420, §172.422, §172.423

§172.426, §172.427

CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance: Divisions 6.1 and 6.2



Infectious Substance Label not required on an outer packaging, if the OSHA Biohazard Marking (29 CFR 1910.103(g)) is used. The CDC Etiologic Agent Label must be used as prescribed in 42 CFR 72.3 and 72.6.

§172.405(c), §172.429, §172.430, §172.432

CLASS 7 Radioactive



Empty Label

EMPTY

§172.436, §172.438, §172.440, §172.450

CLASS 8 Corrosive



§172.442

CLASS 9 Miscellaneous Hazardous Material



§172.446

Subsidiary Risk Label

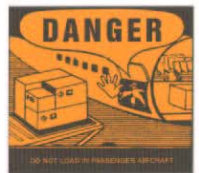


§172.411

For Aircraft Only



Cargo Aircraft Only



§172.448

INNER PACKAGES
COMPLY WITH
PRESCRIBED
SPECIFICATIONS

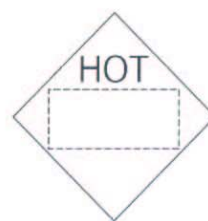
§173.25(a)(4)



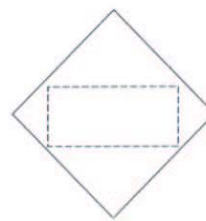
§172.312(a)



§172.322



§172.325



§172.332(a)

HAZARDOUS MATERIALS MARKINGS

Fumigant Marking



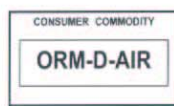
§172.302(g) and §173.9



§172.313(a)



§172.316(a)



§172.316(a)(1)

Keep a copy of the Emergency Response Guidebook handy!

Hazardous Materials Warning Placards

Actual placard size: 273 mm (10.8 inches) on all sides

CLASS 1 Explosives



§172.522,
§172.523,
§172.524,
§172.525

*Enter Division Number 1.1, 1.2, or 1.3, and compatibility group letter, when required; placard any quantity. For Divisions 1.4, 1.5, and 1.6, enter compatibility group letter, when required; placard 454 kg (1,001 lbs) or more.

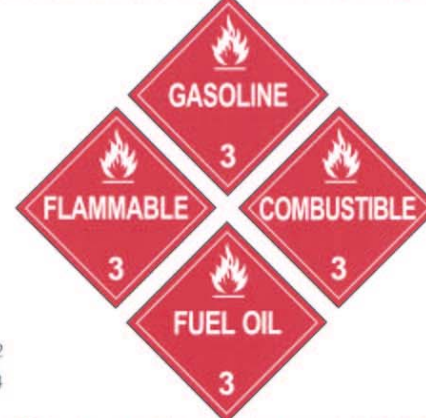
CLASS 2 Gases



§172.528,
§172.530,
§172.532,
§172.540

For NON-FLAMMABLE GAS, OXYGEN (compressed gas or refrigerated liquid), and FLAMMABLE GAS, placard 454 kg (1,001 lbs) or more gross weight. For POISON GAS (Division 2.3), placard any quantity.

CLASS 3 Flammable Liquid and Combustible Liquid



§172.542
§172.544

For FLAMMABLE, placard 454 kg (1,001 lbs) or more. GASOLINE may be used in place of FLAMMABLE placard displayed on a cargo tank or portable tank transporting gasoline by highway. Placard combustible liquid transported in bulk. See §172.504(f)(2) for use of FLAMMABLE placard in place of COMBUSTIBLE. FUEL OIL may be used in place of COMBUSTIBLE on a cargo or portable tank transporting fuel oil not classed as a flammable liquid by highway.

CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet



§172.546, §172.547, §172.548

For FLAMMABLE SOLID and SPONTANEOUSLY COMBUSTIBLE, placard 454 kg (1,001 lbs) or more. For DANGEROUS WHEN WET (Division 4.3), placard any quantity.

CLASS 5 Oxidizer & Organic Peroxide



§172.550, §172.552

For OXIDIZER and ORGANIC PEROXIDE (other than TYPE B, temperature controlled), placard 454 kg (1,001 lbs) or more. For ORGANIC PEROXIDE (Division 5.2), Type B, temperature controlled, placard any quantity.

CLASS 6 Poison (Toxic) and Poison Inhalation Hazard



§172.504(f)(10)
§172.554,
§172.555

POISON-INHALATION HAZARD (Division 6.1), Zone A or B inhalation hazard only, placard any quantity. For POISON, (PGI or PGII, other than Zone A or B inhalation hazard only) and KEEP AWAY FROM FOOD (PGIII), placard 454 kg (1,001 lbs) or more. For Transition 2003, see §171.14(b)(3).

CLASS 7 Radioactive



§172.556

Placard any quantity - packages bearing RADIOACTIVE YELLOW-III labels only. Certain low specific activity radioactive materials in "exclusive use" will not bear the label, but the radioactive placard is required for exclusive use shipments of low specific activity material and surface contaminated objects transported in accordance with §173.427(b)(3) or (c).

CLASS 8 Corrosive



§172.558

Placard 454 kg (1,001 lbs) or more.

CLASS 9 Miscellaneous



§172.560

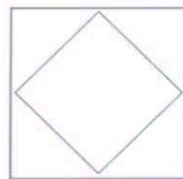
Not required for domestic transportation. A bulk packaging containing a Class 9 material must be marked with the appropriate ID number displayed on a Class 9 placard, an orange panel, or a white square-on-point display.

Dangerous



§172.521

A freight container, unit load device, transport vehicle, or rail car which contains non-bulk packaging with two or more categories of hazardous materials that require different placards specified in Table 2 may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2 must be applied.



§172.527

White square background required for placard for highway route controlled quantity radioactive material and for rail shipment of certain explosives and poisons, and for flammable gas in a DOT 113 tank car (§172.507 and §172.510).

PLACARDS
OR
ORANGE PANELS

1090

§172.332

and

Appropriate placard must be used.

IDENTIFICATION NUMBER DISPLAYS



MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packagings; (2) Vehicles or containers containing 4000 kg (8,820 lbs) in non-bulk packages of only a single hazardous material having the same proper shipping name and identification number; and (3) 1000 kg (2,205 lbs) of materials poisonous by inhalation in Hazard Zone A or B. See §172.301(a)(3) and §172.313(c).

Response begins with identification!

General Guidelines on Use of Warning Labels and Placards

LABELS

See 49 CFR, Part 172, Subpart E for complete labeling regulations.

- The Hazardous Materials Table [§172.101, Col. 6] identifies the proper label(s) for the hazardous material listed.
- Any person who offers a hazardous material for transportation **MUST** label the package, if required [§172.400(a)].
- Labels may be affixed to packages when not required by regulations, provided each label represents a hazard of the material contained in the package [§172.401].
- The appropriate hazard class or division number must be displayed in the lower corner of a primary and subsidiary hazard label [§172.402(b)].
- For classes 1,2,3,4,5,6, and 8, text indicating a hazard (e.g., "CORROSIVE") IS NOT required on a label. The label must otherwise conform to Subpart E of Part 172 [§172.405].
- Labels must be printed on or affixed to the surface of the package near the proper shipping name marking [§172.406(a)].
- When primary and subsidiary labels are required, they must be displayed next to each other [§172.406(c)].
- For a package containing a Division 6.1, Packing Group III material, the POISON label specified in §172.430 may be modified to display the text PG III instead of POISON or TOXIC. Also see [§172.313(d)].
- The class number must be displayed on a subsidiary label. For Transition 2005, see [§172.402(b)].

PLACARDS

See 49 CFR, Part 172, Subpart F, for complete placarding regulations.

- Each person who offers for transportation or transports any hazardous material subject to the Hazardous Materials Regulations must comply with all applicable requirements of Subpart F [§172.500].
- Placards may be displayed for a hazardous material, even when not required, if the placarding otherwise conforms to the requirements of Subpart F of Part 172 [§172.502(c)].
- For other than Class 7 or the DANGEROUS placard, text indicating a hazard (e.g., "FLAMMABLE") is not required. Text may be omitted from the OXYGEN placard only if the specific ID number is displayed on the placard [§172.519(b)(3)].
- For a placard corresponding to the primary or subsidiary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard [§172.519(b)(4)].
- Any transport vehicle, freight container, or rail car containing any quantity of material listed in Table 1 must be placarded [§172.504].
- When the gross weight of all hazardous materials in non-bulk packages covered in Table 2 is less than 454 kg (1,001 lbs), no placard is required on a transport vehicle or freight container [§172.504(c)].
- Notes: See [§172.504(f)(10)] for placarding Division 6.1, PG-III materials.
- Placarded loads require registration with USDOT. See [§107.601] for registration regulations.

Inhalation Hazard Materials



§172.540



§172.555



§172.313

Materials which meet the inhalation toxicity criteria have additional "communication standards" prescribed by the HMR. The words "Poison-Inhalation Hazard" must be entered on the shipping paper, as required [§172.203(m)(2)]. Packagings must be marked "Inhalation Hazard" or, alternatively, when the words "Inhalation Hazard" appear on the label or placard, the "Inhalation Hazard" marking is not required on the package. Transport vehicles, freight containers, portable tanks and unit load devices that contain a poisonous material subject to the "Poison-Inhalation Hazard" shipping description, must be placarded with a POISON INHALATION HAZARD or POISON GAS placard, as appropriate. This shall be in addition to any other placard required for that material [§172.504].

Placarding Tables

[§172.504(e)]

Table 1 (Placard any quantity)

Hazard class or division	Placard name
1.1	EXPLOSIVES 1.1
1.2	EXPLOSIVES 1.2
1.3	EXPLOSIVES 1.3
2.3	POISON GAS
4.3	DANGEROUS WHEN WET
5.2 (Organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE
6.1 (Inhalation Hazard, Zone A or B)	POISON INHALATION HAZARD
7 (Radioactive Yellow III label only)	RADIOACTIVE

Table 2 (Placard 1,001 lbs or more)

Hazard class or division	Placard name
1.4	EXPLOSIVES 1.4
1.5	EXPLOSIVES 1.5
1.6	EXPLOSIVES 1.6
2.1	FLAMMABLE GAS
2.2	NON-FLAMMABLE GAS
3	FLAMMABLE
Combustible Liquid	COMBUSTIBLE
4.1	FLAMMABLE SOLID
4.2	SPONTANEOUSLY COMBUSTIBLE
5.1	OXIDIZER
5.2 (Other than organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE
6.1 (Other than inhalation hazard, Zone A or B)	POISON
6.2	(None)
8	CORROSIVE
9	CLASS 9 [§172.504(f)(9)]
ORM-D	(None)

For complete details, refer to one or more of the following:

- Code of Federal Regulations, Title 49, Transportation, Parts 100-185. [All modes]
- International Civil Aviation Organization (ICAO) Technical Instructions for Safe Transport of Dangerous Goods by Air. [Air]
- International Maritime Organization (IMO) Dangerous Goods Code. [Water]
- Transportation of Dangerous Goods Regulations of Transport Canada. [All Modes]



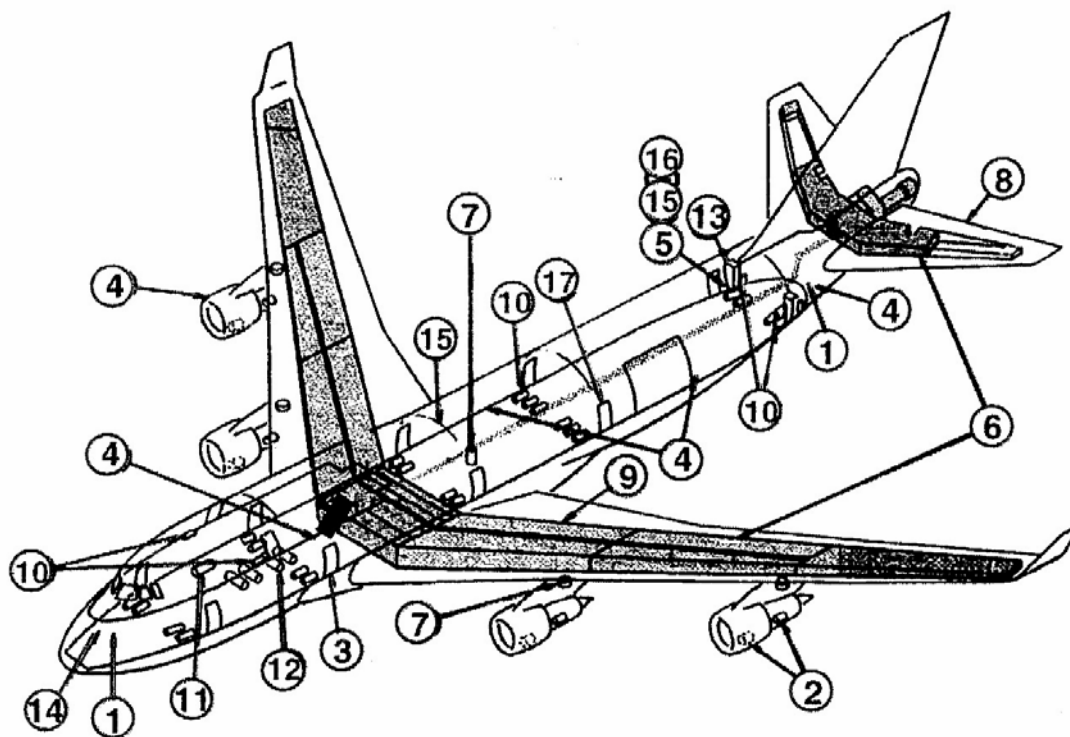
U.S. Department
of Transportation
**Research and
Special Programs
Administration**

Copies of this Chart may be obtained by
contacting:

USDOT/RSPA/OHMIT/DHM-50
Washington, D.C. 20590
or
Phone: 202-366-2301
E-mail: training@rspa.dot.gov
Web site: www.rspa.dot.gov

APPENDIX D

Hazardous Materials Onboard Aircraft



- | | |
|--|--|
| 1. Batteries, Aircraft (qty. 2) | 9. Ordnance Devices (off-wing escape) |
| 2. Engine Oil (as hazardous waste) | 10. Oxygen Bottles, Portable, Gaseous |
| 3. Escape Slides/Life Rafts (all entry doors/rafts optional) | 11. Oxygen Bottles, Crew System, Gaseous |
| 4. Fire Bottles (APU, engines, lower cargo compartment, and lavatory waste containers) | 12. Oxygen Bottles, Passenger System, Gaseous (Standard) |
| 5. Fire Extinguishers (attendant stations, closets, galleys, etc.) | 13. Oxygen Generators (optional: each PSU standard: each attendant station and lavatory) |
| 6. Fuel | 14. Rain Repellant |
| 7. Hydraulic Fluid, Reservoirs (as hazardous waste) | 15. Refrigerant (located in each galley) |
| 8. Uranium (depleted, counter-balance weights) | 16. Smoke Hoods |
| | 17. Tritium Signs (aisle and emergency exit doors) |

APPENDIX E**DG/HM EXCEPTIONS**

The following are exceptions to 49 CFR, as stated in Section 175.10, Exceptions, and may be carried aboard company aircraft.

a) This subchapter does not apply to:

- 1) Aviation fuel and oil in tanks that are in compliance with the installation provisions of 14 CFR, Chapter 1.
- 2) Hazardous materials required aboard an aircraft in accordance with the applicable airworthiness requirements and operating regulations. Unless otherwise approved by the Associate Administrator, items of replacement for such hazardous materials must be transported in accordance with this subchapter except that –
 - (i) In place of the required packagings, packagings specially designed for the transport of aircraft spares and supplies may be used, provided such packagings provide at least an equivalent level of protection to those that would be required by this subchapter;
 - (ii) Aircraft batteries are not subject to quantity limitations such as those provided in section 172.101 or 175.75(a) of this subchapter;
 - (iii) A tire assemble with a serviceable tire is not subject to the provisions of this subchapter provided the tire is not inflated to a gauge pressure exceeding the maximum rated pressure for that tire.
- 3) Hazardous Materials loaded and carried in hoppers or tanks of aircraft certified for use in aerial seeding, dusting, spraying, fertilizing, crop improvement, or pest control, to be dispensed during such an operation.
- 4) The following hazardous materials when carried by a passenger or crew member for personal use in conformance with the following conditions:
 - (i) Non-radioactive medicinal and toilet articles (including aerosols) may be carried in checked or carry-on baggage. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release;
 - (ii) One self-defense spray (see 171.8 of this subchapter), not exceeding 118 ml (4 fluid ounces) by volume, that incorporates a positive means to prevent accidental discharge may be carried in checked baggage only;
 - (iii) Other aerosols in Division 2.2 with no subsidiary risk may be carried in checked baggage only. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release;
 - (iv) The aggregate quantity of hazardous materials carried by the person may not exceed 2 kg (70 ounces) by mass or 2 liters (68 fluid ounces) by volume and the capacity of each container may not exceed 0.5 kg (18 ounces) by mass or 470 ml (16 fluid ounces) by volume.
 - (v) The provisions of this paragraph (a)(4) also apply to an aircraft operator when

APPENDIX E (cont'd)

transporting passenger or crew member baggage to its intended destination, if the baggage has been separated from the passenger or crew member, including transfer to another carrier for transport to its intended destination.

- 5) Small-arms ammunition for personal use carried by a crewmember or passenger in his baggage (excluding carry-on baggage) if securely packed in fiber, wood, or metal boxes or other packagings specifically designed to carry small amounts of ammunition. This paragraph does not apply to persons traveling under the provisions of 49 CFR 1544.219.
- 6) [Reserved.]
- 7) Oxygen, or any hazardous material used for the generation of oxygen, for medical use by a passenger, which is furnished by the aircraft operator in accordance with 14 CFR Part 121.574 or Part 135.91. For the purposes of this paragraph, an aircraft operator that is not a certificate holder under 14 CFR Part 121 or Part 135, may apply this exception in conformance with 14 CFR Part 121.574 or Part 135.91 in the same manner as required for a certificate holder.
- 8) Human beings and animals with an implant medical device, such as a heart pacemaker, that contains Class 7 (radioactive material) or with radiopharmaceuticals that have been injected or ingested.
- 9) Smoke grenades, flares, or similar devices carried only for use during a sport parachute jumping activity.
- 10) Safety matches or a lighter intended for use by an individual when carried on one's person. However, lighters containing unabsorbed liquid fuel (other than liquefied gas), lighter fuel, and lighter refills are not permitted on one's person or in checked or carry-on baggage.
- 11) Smoke grenades, flares, and pyrotechnic devices affixed to aircraft carrying no person other than a required flight crew member during any flight conducted at and as a part of a scheduled air show or exhibition or aeronautical skill. The affixed installation accommodating the smoke grenades, flares, or pyrotechnic devices on the aircraft must be approved by the FAA for its intended use.
- 12) Hazardous material which are loaded and carried on or in cargo aircraft only, and which are to be dispensed or expended during flight for weather control, environmental restoration or protection, forest preservation and protection, flood control, avalanche control purposes, or routine quality control testing of special fireworks manufactured for the Department of Defense, when the following requirements are met:
 - (i) Operations may not be conducted over densely populated areas, in a congested airway, or near any airport where air carrier passenger operations are conducted.
 - (ii) Each operator shall prepare and keep current a manual containing operational guidelines and handling procedures, for the use and guidance of flight, maintenance, and ground personnel concerned in the dispensing or expending of

APPENDIX E (cont'd)

hazardous materials**. The manual must be approved by the FAA Civil Aviation Security Office responsible for the operator's overall security program or the FAA Civil Aviation Security Office in the region where the operator is located. The manual must be approved by the FAA Civil Aviation Security Office responsible for reviewing the operator's hazardous materials program or the FAA Civil Aviation Security Office in the region where the operator is located. Each operation must be conducted in accordance with the manual.

**** Information regarding the exception for aerial dispensing or expending of hazardous materials may be obtained from the nearest FAA Civil Aviation Security Field Office.**

- (iii) No person other than a required flight crewmember, FAA inspector, or person necessary for handling or dispensing the hazardous material may be carried on the aircraft.
 - (iv) The operator of the aircraft must have advance permission from the owner of any airport to be used for the dispensing or expending operation.
 - (v) When dynamite and blasting caps are carried for avalanche control flights, the explosives must be handled by, and at all times, be under the control of a qualified blaster. When required by State or local authority, the blaster must be licensed and the State or local authority must be identified in writing to the FAA Civil Aviation Security Office responsible for reviewing the operator's hazardous materials program or the FAA Civil Aviation Security Office in the region where the operator is located.
 - (vi) When special fireworks aerial illuminating flares, manufactured specifically for the DOD, are carried for in-flight routine quality control testing, the fireworks must be handled by, and at all times be under the control of a qualified person who has been trained in accordance with a program approved by the local FAA Civil Aviation Security Office. The aircraft must be specially modified to conduct the testing operation and must be specifically approved for such operations by the local FAA Civil Aviation Security Office before the flight.
- 13) Carbon dioxide, solid (dry ice) when:
- (i) in quantities not exceeding 2.3 Kg (5.07 pounds) per package packed as prescribed by 49 CFR Section 173.217 of this subchapter and used as a refrigerant for the contents of the package. The package must be marked with the name of the contents being cooled, the net weight of the dry ice or an indication that the net weight is 2.3 (5.07 pounds) or less, and marked "Carbon Dioxide, Solid" or "Dry Ice";
 - (ii) Intended for use in food and beverage service aboard aircraft; or

APPENDIX E (cont'd)

- (iii) In quantities not exceeding 2 kg (4.4 pounds) per passenger when used to pack perishables in carry-on baggage provided the package permits the release of carbon dioxide gas.
- 14) A transport incubator unit necessary to protect life or an organ preservation unit necessary to protect human organs provided:
- (i) The compressed gas used to operate the unit is in an authorized DOT specification cylinder and is marked, labeled, filled, and maintained as prescribed by this subchapter;
 - (ii) Each battery used in the operation of the unit is of the non-spillable type;
 - (iii) The unit is so constructed so that valves, fittings, and gauges are protected from damage;
 - (iv) The Pilot-In-Command is advised when the unit is on board and when it is intended for use;
 - (v) The unit is accompanied by a person qualified to operate it;
 - (vi) The unit is secured in the aircraft in a manner so as not to restrict access to or use of any required emergency or regular exit or of the aisle in the passenger compartment;
 - (vii) Smoking within 3 meters (10 feet) of the unit is prohibited.
- 15) Alcoholic beverages, perfumes, colognes, and liquefied gas lighters that have been examined by the Bureau of Explosives (B of E) and approved by the Associate Administrator, carried aboard a passenger-carrying aircraft by the operator for use or sale on the aircraft.
- 16) Perfumes and colognes purchased through duty-free sales, carried by passengers or crew in carry-on baggage.
- 17) Alcoholic beverages containing:
- (i) Not more than 24% alcohol by volume; or
 - (ii) More than 24% and not more than 70% alcohol by volume when in retail packaging not exceeding 5 liters (1.3) gallons) carried by a crew member or passenger in checked or carry-on baggage, with a total net quantity per person of 5 liters (1.3 gallons) for such beverages.
- 18) Compressed gas cylinders of Division 2.2 worn by passengers for the operation of mechanical limbs and spare cylinders of a similar size for the same purpose in sufficient quantities to ensure an adequate supply for the duration of the journey.

APPENDIX E (cont'd)

19) A wheelchair or other battery-powered mobility aid equipped with a non-spillable battery, when carried as checked baggage, provided that:

- (i) The battery meets the provisions of 173.159(d) for non-spillable batteries;
- (ii) Visual inspection, including where necessary, removal of the battery, reveals no obvious defects (however, removal of the battery from the housing should be performed by qualified airline personnel only.);
- (iv) The battery is disconnected and terminals are insulated to prevent short circuits; and
- (iv) The battery is securely attached to the wheelchair or mobility aid, is removed and placed in a strong, rigid packaging that is marked "NON-SPILLABLE BATTERY" (unless fully enclosed in a rigid housing that is properly marked), or is handled in accordance with (a)(20)(iv) of this section.

20) A wheelchair or other battery-powered mobility aid equipped with a spillable battery, when carried as checked baggage, provided that:

- (i) Visual inspection including, where necessary, removal of the battery, reveals no obvious defects (However, removal of the battery from the housing should be performed by qualified airline personnel only.);
- (ii) The battery is disconnected and terminals are insulated to prevent short circuits.
- (iii) The Pilot-In-Command is advised, either orally or in writing, prior to departure, as to the location of the battery aboard the aircraft; and
- (iv) The wheelchair or mobility aid is loaded, stowed, secured, and unloaded in an upright position, or the battery is removed, the wheelchair or mobility aid is carried as checked baggage without further restriction and the removed battery is carried in a strong, rigid, packaging under the following conditions:
 - (A) The packaging must be leak-tight and impervious to battery fluid. An inner liner may be used to satisfy this requirement if there is absorbent material placed inside of the liner and the liner has a leak-proof closure;
 - (B) The battery must be protected against short circuits, secured upright in the packaging, and be packaged with enough compatible absorbent material to completely absorb liquid contents in the event of rupture of this battery; and
 - (C) The packaging must be labeled with a CORROSIVE label, marked to indicate proper orientation, and marked with the words, "Battery, wet, with wheelchair."

21) Hair curlers containing hydrocarbon gas, no more than one per passenger or crew member, provided that the safety cover is securely fitted over the heating element. Gas refills for such curlers are not permitted in checked or carry-on baggage.

APPENDIX E (cont'd)

22) A mercurial barometer or thermometer carried as carry-on baggage only, by a representative of a government weather bureau or similar official agency, provided that individual advises the operator of the presence of the barometer or thermometer in his baggage. The barometer or thermometer must be packaged in a strong outer packaging having a sealed inner liner or a bag of strong, leak-proof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position. The Pilot-In-Command must be informed of the presence of any such barometer or thermometer by the operator of the aircraft.

23) With the approval of the operator of the aircraft and as carry-on baggage, electrically powered heat-producing articles (e.g., battery-operated equipment such as underwater torches and soldering equipment) which, if accidentally activated, will generate extreme heat and can cause fire. The heat-producing component or the energy source must be removed so as to prevent unintentional functioning during transport.

24) Reserved

25) With the approval of the aircraft operator, a passenger or crew member may carry in checked or carry-on baggage no more than two small gas cartridges containing no more than a Division 2.2 gas that are fitted into a self-inflating lifejacket for inflation purposes, plus no more than two spare cartridges.

26) A small medical or clinical mercury thermometer for personal use, when carried in protective cases by passengers or crew members.

b) A cylinder containing medical-use compressed oxygen, owned or leased by an aircraft operator or offered for transportation by a passenger needing it for personal medical use at destination, may be carried in the cabin of a passenger-carrying aircraft in accordance with the following provisions:

- 1) No more than six cylinders belonging to the aircraft operator and, in addition, no more than one cylinder per passenger needing the oxygen at destination, may be transported in the cabin of the aircraft under the provisions of the paragraph (b);
- 2) The rated capacity of each cylinder may not exceed 850 liters (30 cubic feet);
- 3) Each cylinder and its overpack or outer packaging (see Special Provision A52 in Section 172.102 of this subchapter) must conform to the provisions of this subchapter;
- 4) The aircraft operator shall securely stow the cylinder in its overpack or outer package in the cabin of the aircraft and shall notify the pilot-in-command as specified in Section 175.33 of this part; and

APPENDIX E (cont'd)

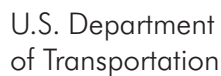
- 5) Shipments under this paragraph (b) are not subject to-
 - (i) Subpart C and, for passengers only, subpart H of part 172 of this subchapter;
 - (ii) Section 173.25(a)(4) of this subchapter.
 - (v) Section 175.85(i).

APPENDIX F

Hazardous Materials Incident Report: DOT Form F 5800.1 (01-2004)

Includes Guide for Preparing Hazardous Materials Incidents Reports

SEE ATTACHED



Research and Special Programs Administration

Guide for Preparing Hazardous Materials Incidents Reports





U.S. Department
of Transportation

**Research and
Special Programs
Administration**

Hazardous Materials Incident Reporting

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Overview

Hazardous Materials Incident Report

Department of Transportation Form F 5800.1

What Federal Regulation Requires Me To Submit the Report?

The Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) require that certain types of incidents be reported to the Research and Special Programs Administration (RSPA). Section 171.15 of the HMR requires an immediate telephonic report (within 12 hours) of certain types of hazardous materials incidents and a follow-up written report. Section 171.16 requires a written report for certain types of hazardous materials incidents within 30 days. Each type of report is explained below. (The full text of these sections is at the end of the instructions.)

What is the Purpose of the Report?

The information you are providing in this report is fundamental to hazardous material transportation risk analysis and risk management by government and industry. It allows us to better understand the causes and consequences of hazardous material transportation incidents. The data is used to identify trends and provide basic program performance measures. It helps to demonstrate the effectiveness of existing regulations and to identify areas where changes should be considered. It also assists all parties, including industry segments and individual companies, in understanding the types and frequencies of incidents, what can go wrong, and possible measures that would prevent their recurrence. Your accurate and complete description of incidents can make a significant contribution to continual safety improvement through better regulations, cooperative partnerships, and individual efforts.

Who Must Complete the Report?

Any person in possession of a hazardous material during transportation, including loading, unloading and storage incidental to transportation, must report to the

Department of Transportation (DOT) if certain conditions are met. This means that when the conditions apply for completing the report, the entity having physical control of the shipment is responsible for filling out and filing DOT Form F 5800.1.

For example, if a shipper is carrying hazardous material, the consignee is unloading the material and there is an incident involving this material, the consignee is responsible for filling out and filing the form. However, if the consignee is unloading the hazardous material and causes a hazardous materials incident involving a consignment intended for someone else, the shipper is responsible for filling out and filing the form.

What Definitions Should I Know in Order to Complete the Report?

In order to accurately complete the report, you should be familiar with the following terms. A complete list of definitions is contained in § 171.8.

Bulk packaging—a packaging, other than a vessel or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment and which has:

- (1) A maximum capacity greater than 450 liters (119 gallons) as a receptacle for a liquid;
- (2) A maximum net mass greater than 400 kilograms (822 pounds) and a maximum capacity greater than 450 liters (119 gallons) as a receptacle for a solid; or
- (3) A water capacity greater than 454 kilograms (1,000 pounds) as a receptacle for a gas as defined in § 173.115.

Cargo tank—a bulk packaging which is:

- (1) A tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings, and closures;

- (2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but which, by reason of its size, construction, or attachment to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle; and
- (3) Is not fabricated under a specification for cylinders, intermediate bulk containers, multi-unit tank car tanks, portable tanks, or tank cars.

Hazardous material—a substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and that has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous under the provisions of § 172.101, the Hazardous Materials Table (HMT), and materials that meet the defining criteria for hazard classes and divisions in Part 173.

Hazardous substance—a material, including its mixtures and solutions, that—

- (1) Is listed in Appendix A to § 172.101;
- (2) Is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in Appendix A to § 172.101; and
- (3) When in a mixture or solution—
 - (i) For radionuclides, conforms to paragraph 7 of Appendix A to § 172.101.
 - (ii) For other than radionuclides, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in Table 1.

The term *hazardous substance* does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance

Table 1 Reportable Quantities.

RQ pounds (kilograms)	Concentration by Weight	
	Percent	PPM
5000 (2270)	10	100,000
1000 (454)	2	20,000
100 (45.4)	0.2	2,000
10 (4.54)	0.02	200
1 (0.454)	0.002	20

in Appendix A to § 172.101, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas useable for fuel (or mixtures of natural gas and such synthetic gas).

Hazardous waste—any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

Marine pollutant—a material that is listed in Appendix B to § 172.101 (also see § 171.4) and, when in a solution or mixture of one or more marine pollutants, is packaged in a concentration that equals or exceeds:

- (1) Ten percent by weight of the solution or mixture for materials listed in Appendix B; or
- (2) One percent by weight of the solution or mixture for materials that are identified as severe marine pollutants in Appendix B.

Undeclared hazardous material—means a hazardous material that is:

- (1) Subject to any of the hazard communication requirements in subparts C (Shipping Papers), D (Marking), E (Labeling), and F (Placarding) of Part 172 of this subchapter, or an alternative marking requirement in Part 173 of this subchapter (such as §§ 173.4(a)(10) and 173.6(c)); and
- (2) Offered for transportation in commerce without any visible indication to the person accepting the hazardous material for transportation that a hazardous material is present, on either an

accompanying shipping document, or the outside of a transport vehicle, freight container, or package.

Unintentional release—the escape of a hazardous material from a package on an occasion not anticipated or planned. This includes releases resulting from collision, package failures, human error, criminal activity, negligence, improper packing, or unusual conditions such as the operation of pressure relief devices as a result of over-pressurization, overfill, or fire exposure. It does not include releases, such as venting of packages, where allowed, and the operational discharge of contents from packages.

Additionally, for purposes of reporting on this form, the following definitions should be used:

Lading retention system—a lading retention system consists of those items or equipment that provide containment of hazardous materials at some point during transportation, including loading and unloading. The cargo tank shell, associated piping, and valves are an example of a lading retention system. Dents or damage to a tank requiring repair to an accident protection system guarding the tank are examples of incidents that must be reported. Paint chips and scratches to either the tank or the accident protection system are examples of incidents that do not require reporting.

Major transportation artery—a highway, main road or secondary road but not a side street or dirt road. In the case of rail, any rail line except a rail spur.

When Must I Submit a Written Report (DOT Form F 5800.1)?

Under § 171.16, you must submit a written report within 30 days after any of the following:

- An incident that was reported by telephonic notice under § 171.15;
- An unintentional release (see definitions) of a hazardous material during transportation including loading, unloading and temporary storage related to transportation;
- A hazardous waste is released;

- An undeclared shipment with no release is discovered; or
- A specification cargo tank 1,000 gallons or greater containing any hazardous materials that—

- (1) received structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system, and
- (2) did not have a release.

To clarify the requirement for a report based on structural damage to a specification cargo tank, Table 2 illustrates some examples.

When Is a Report Not Required?

You are not required to report a release of a hazardous material if **ALL** of the following apply:

- The shipment is not being offered for transportation or being transported by air;
- None of the criteria in § 171.15(a) applies;
- The material is not a hazardous waste;
- The material is properly classed as an ORM-D, or a Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9;
- Each package has a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
- The total aggregate release is less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
- The material does not meet the definition of an undeclared hazardous material in § 171.8; and
- The shipment is an undeclared material discovered in an air passenger's checked or carry-on baggage during the airport screening process.

Table 2 Examples to Clarify When to Report Structural Damage to a Specification Cargo Tank.

Incident Report Required	No Incident Report Required
Damage to an outlet valve that affects seating and requires replacement.	Handle broken or knocked off valve - but otherwise undamaged.
Serious damage that, if worse, could have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that contain hazardous materials during transportation is in this category.	Serious damage that, even if worse, would not have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that are normally not charged during transportation is in this category.
Cargo tank damage that requires professional inspection or recertification to ensure it is capable of meeting requirements.	Minor damage that obviously will not affect continuation of the cargo tank in service.
Cargo tank damage that requires immediate or subsequent repair because of questions about cargo tank integrity.	Cargo tank damage that requires repair for cosmetic reasons only.

Also, you are not required to report releases of minimal amounts of material (i.e., a pint or less) released from the manual operation of seals of pumps, compressors, or valves, during the connecting or disconnecting of loading and unloading lines, or, for materials for which venting is authorized, from vents, provided these releases do not result in property damage or trigger any of the telephonic notifications requirements found in § 171.15.

When Must I Make a Telephonic Report?

Under § 171.15, you must provide **telephone notice within 12 hours** after the incident occurs when one of the following conditions occurs during the course of transportation and is a direct result of the hazardous material:

- A person is killed;
- A person receives an injury requiring admittance to a hospital;
- The general public is evacuated for one hour or more;
- One or more major transportation arteries or facilities are closed for one hour or more;
- The operational flight plan or routine of an aircraft is altered;
- Fire, breakage, spillage or suspected radioactive contamination occurs involving a radioactive material;

- Fire, breakage, spillage or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste;
- There is a release of a marine pollutant in a quantity exceeding 450 liters (119) gallons for liquids or 400 kilograms (882 pounds) for solids; or
- A situation exists of such a nature that in the judgment of the person in possession of the hazardous material, it should be reported to DOT's National Response Center (NRC) even though it does not meet the above criteria.

You may decide that the situation should be reported even though it does not meet any of the above criteria. Make sure that you request the NRC report number when you make your telephonic report.

What Telephone Number Do I Call to Make an Immediate Notification of a Hazardous Materials Incident?

You must call 800-424-8802 (toll-free) or 202-267-2675 (toll-call) to make a telephonic incident report. This is the number to the NRC. This call must be made within 12 hours of the events that trigger this requirement. If the incident

involves an infectious substance, you may notify the Director, Center for Disease Control and Prevention (CDC), U.S. Public Health Service, Atlanta, Georgia, toll-free at 800-232-0124. If a discrepancy of a shipment intended for air is discovered following its acceptance aboard aircraft, notify the nearest Federal Aviation Administration Civil Aviation Security Office as soon as practical.

How Long Do I Have to Submit the Written Report?

You must submit your written report within **30 days of discovery of the incident**, § 171.16(a).

Am I Required to Update the Information in the Report?

Yes. You must use DOT Form F 5800.1 and check the "A supplemental (follow-up) report" box on question #2 to provide additional information after the initial report. You are required to provide updates for up to one year after the initial filing if more information is gained or new developments arise concerning the following, for example:

- A death results from injuries caused by a hazardous material;
- The person responsible for preparing the original report learns that there is a misidentification of hazardous material or package information;

- Damage or loss or related costs that were not known at the time the report was filed become known; or
- Revised estimates of damages, losses, and related costs result in a change of \$25,000 or more, or 10% of the original cost estimates, whichever is greater, even if the original estimate was under \$500.

How and Where Do I Submit My Completed Report?

- You can mail paper copies of the report to the Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, DC 20590-0001; or
- You can submit the report online at <http://hazmat.dot.gov>.

How Long Must I Keep a Copy of the Report?

You must keep a copy of each report or an electronic image of the report for two years after the date you submit it to RSPA (§ 171.16(b)(3)).

Where Must I Keep a Copy of the Report?

The report must be accessible through your company's principal place(s) of business. You must be able to make the report available upon request to authorized representatives or a special agent of the Department within 24 hours of such a request (§ 171.16(b)(3)).

How Can I Get a Blank Copy of the DOT Form F 5800.1?

There are a variety of sources for obtaining the DOT Form F 5800.1. Please note that you are allowed to make unlimited photocopies of the form and distribute them.

- You may obtain limited copies of the form from the Information Systems Manager at the above address.
- You may download a copy of the form from our website at <http://hazmat.dot.gov/spills.htm>

- Our Fax on Demand service has copies of the instructions and the form. Call 800-467-4922 and choose the Fax on Demand option #2.

How Long Does It Take To Complete the Report?

RSPA anticipates that it will take you approximately 1.6 hours to complete this report. This estimate includes the time it will take you to review the instructions, search your existing data sources for information, gather the required data, and complete and review the report.

How Can I Comment on the Length of Time Needed to Complete the Report or on the Amount of Information Required in the Report?

You can send your comments on the report, and any suggestions you have for reducing the amount of time needed to complete the report, to the following address:

- (1) Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, DC 20590-0001.

Please verify that your information is accurate. Although the required information is generally available at the time of the incident, you may need to do some additional investigation in order to obtain all of the facts pertaining to deaths, injuries or damage amounts. If you submit complete and accurate information at the time you file the report, it will decrease the chance of your having to supply missing information to DOT at a later date. RSPA may follow up on incomplete forms.

Instructions

Completing DOT Form F 5800.1

Please print. Fill in all applicable blanks accurately to the best of your ability.

Part I: Report Type

- (1) *This is to report:* Check the box that describes why you are filling out this form. This will normally be "A) A hazardous material incident." If you are reporting an undeclared shipment with no release, check the corresponding box, "B)." If you are reporting an incident involving a cargo tank motor vehicle containing a hazardous material that received structural damage to the lading retention system that may affect its ability to retain lading but does not release a hazardous material, check that appropriate box, "C)."
 - (2) *Indicate what type of report this is:* If this is an initial report, check the "initial report" box. If this is a follow-up to a previous report, check the "A supplemental (follow-up) report" box. If you are using additional pages, check the "Additional Pages" box.

Part II: General Incident Information

- (3), (4) *Date & Time of Incident:* Enter the date and time the incident occurred. If you do not know the actual date and time, give the date and time you discovered the incident. Use 24-hour time for the incident time (e.g., "2400" for midnight, "1200" for noon, "0747" for 7:47 a.m., "2115" for 9:15 p.m.).
- (5) *Enter National Response Center Report Number:* If this incident was reported to the NRC, fill in the report number NRC assigned to the incident.
- (6) *If you submitted a report to another Federal DOT agency, enter the agency and report number:* If you were required to fill out a report for another federal agency such as the Federal

Railroad Administration (FRA) or the Federal Motor Carrier Safety Administration (FMCSA) for this incident, please include the agency and report number. This will facilitate our combination of information.

- (7) *Location of Incident:* Enter the geographic location of the incident (city, county, state, and zip code). If you do not know the actual location where the incident occurred, give the location where it was discovered. If the incident occurred at an airport or rail yard, include the name of the facility. If the incident occurred on a body of water, include the name and/or river mile. If you do not know the street address, or if the incident occurred on a highway, include a description such as "On I-70, mile marker 240."
- (8) *Mode of Transportation:* Enter the code that corresponds to the mode of transportation in which the incident occurred or was discovered. If the incident occurred or was discovered in an in-transit storage area (e.g., a terminal or warehouse), check the box that corresponds to the mode by which the package was last transported.
- (9) *Transportation Phase:* Enter the code that describes where the incident occurred in the transportation system. In transit means the incident occurred or was first discovered while the package was in the process of being transported. In-transit storage is storage incidental to transportation, such as at a terminal waiting for the next leg of transportation.
- (10) *Carrier/Reporter:* Carrier/Reporter: Provide the name, street address, Federal DOT number (if applicable), and hazmat registration number of the carrier or the entity who is reporting the incident (if other than a carrier). The entity in physical possession of the material when the incident

occurred or was discovered must report the incident.

- (11) *Shipper/Officer:* Enter the information about the person or entity that originally offered for transportation the material or package involved in the incident.
- (12) *Origin:* Enter the origin of the shipment if the address is different than the shipper/officer information entered in item #11.
- (13) *Destination:* Enter the final destination of the shipment involved in the incident.
- (14) through (19):

Hazardous Material Description: Enter the proper shipping name, technical or trade name, hazard class or division, ID number, packing group, and amount of material released. All of this information, except the amount of material released, can be found on the shipping papers that accompany the shipment, § 172.202. When indicating the amount of material released, include units of measurements (examples: 115 gallons, 69 tons).

- (20) *Was the material shipped as a hazardous waste?* Check the "Yes" box if the material meets the definition of a hazardous waste in § 171.8 (requires an EPA Uniform Hazardous Waste Manifest). Include the EPA Manifest number.
- (21) *Is this a Toxic by Inhalation (TIH) material?* If the material involved in the incident meets the definition of a Toxic by inhalation material in § 173.132, check the "Yes" box and enter the Hazard Zone in the space provided.
- (22) *Was the material shipped under an Exemption, Approval, or Competent Authority Certificate?* If the shipment was shipped under an exemption, an approval, or a Competent Authority Certificate, check the "Yes" box and provide the appropriate assigned number.

- (23) *Was this an undeclared hazardous materials shipment?* If this material was not indicated in any way to be a hazardous material even though it was required to be described as such on a shipping paper, or if the material would normally be excepted from the shipping paper requirements (such as a small quantity material) and does not have the required markings, it is considered an undeclared hazardous material shipment. Check the appropriate box.

Part III: Packaging Information

- (24) *Packaging Type:* Check the box that corresponds to the type of packaging involved in the incident. If more than one packaging type was involved in an incident, reproduce Part III of the form and fill out this section for each of the packaging types. For example, if three different packaging types were involved in an incident, fill out a separate Part III for each packaging type. If the type of packaging is not represented, check the "Other" box and enter a brief description such as "non-specification bulk bin."
- (25) *Enter the appropriate failure codes (found at the end of the instructions):* Enter the codes that describe what failed on the packaging, how the packaging failed, and the cause(s) of the failure. Be sure to enter the codes from the list that corresponds to the particular packaging types checked above (#24). Enter the most important failure point in line 1. If there is a second failure point, enter in line 2. If there are more than two failure points, provide additional information in this format in Part VI. The following explains the content of each line:

What Failed: You can enter up to 2 "What Failed" codes to describe the part of the packaging that fails and was the immediate cause of the release. Often, on a simple

Table 3 Non-bulk and IBC Packaging Identification Codes.

Non-Bulk Packaging					
Outer Packaging					
Type		Material		Head Type	
1	Drum	A	Steel	1	Non-removable
2	Wooden Barrel	B	Aluminum	2	Removable
3	Jerrican	C	Natural Wood		
4	Box	D	Plywood		
5	Bag	F	Reconstituted Wood		
6	Composite Packaging	G	Fiberboard		
7	Pressure receptacle	H	Plastic		
		L	Textile		
		M	Paper, multiwall		
		N	Metal other than Steel or aluminum		
		P	Glass, porcelain, or stoneware		
Inner Packaging					
1	Bottle	A	Metal (any type)		
2	Can	B	Glass, Porcelain, or stoneware		
3	Box	C	Plastic		
4	Bag	D	Fiberboard or cardboard		
5	Cylinder	E	Wood (any type)		
IBC Packaging Identification Codes					
Material of Construction					
1	Metal	3	Composite	5	Wooden
2	Plastic	4	Fiberboard	6	Flexible

packaging, only one code will be required. On more complex packaging, additional entries will help identify where that failure occurred. The first entry should designate the specific point of failure, followed by entries that help identify where that failure occurred. For instance, a deteriorated gasket on a pipe flange on the liquid line would have failure code 121 for gasket entered first and failure code 118 for flange entered second.

How Failed: Enter the "Failure" code that describes how the corresponding part of the packaging failed. The primary way the packaging failed should be entered first.

Cause(s) of Failure: Enter the "Cause of Failure" code that describes what caused the corresponding part of the packaging to fail in the way

it did. The most probable or fundamental cause of failure should be entered first.

If none of the codes on the list fit exactly, use the closest matches and provide additional detail in Part VI. Also, if you believe a better set of codes would be more descriptive of what failed, how it failed, and the causes of failure, suggest them in Part VII.

(26a) *Provide the complete packaging identification markings, if available:* Every specification packaging, UN or DOT, has a packaging identification printed or stamped on it or on a plate attached to the packaging. Examples are provided on the form.

(26b) *For Non-bulk, IBC, or non-specification packaging:* Only fill out 26b if the marking is incomplete, destroyed, or unknown. Fill in the Outer and Inner packaging type and Material of Construction information, as appropriate. If the

packaging is non-bulk or Intermediate Bulk Container (IBC), use the codes in Table 3 to enter the number or letter that applies for either non-bulk or IBC packaging. For non-bulk, IBC or non-specification packaging provide a *description* of the packaging in the space(s) provided.

(27) *Describe the package capacity and the quantity:* Enter the total capacity of the inner and outer package. Also enter the actual amount of hazardous material that was shipped in the package, the number of packages in the shipment, and the number of packages that failed. Please include the units of measurement (liter, gallons, pounds, cubic feet, etc.)

(28) *Provide package construction and test information, as appropriate:* In the case of Non-bulk packagings or IBCs enter the name of the packaging manufacturer or the symbol of the manufacturer *only if* complete identification markings were not provided in #26b. Enter the date of manufacture and the serial number, if applicable. Enter the last test date if the packaging requires periodic testing. Also include the design pressure, shell thickness, head thickness, and service pressure if the failed packagings are of the type indicated in parenthesis after each question. If the packaging contained a valve, or other device that failed and resulted in a hazardous material release, enter the valve or device type, manufacturer (if present and legible), and model number (if present and legible).

(29) *If the package is for Radioactive Materials, complete the following:* Complete this question *only if* a radioactive material was involved. Indicate the packaging category, the packaging certification, certification number, and which nuclides were present, the transportation index (TI), activity of the nuclides, and the criticality safety index.

Part IV: Consequences

(30) *Result of Incident:* Check all boxes that describe what occurred during the incident or as a result of the incident. For example, in a situation where a truckload of 55 gallon drums of corrosive liquids overturns resulting in a release that contaminates a nearby wetlands and stream the boxes "Spillage," "Material Entered Waterway/Storm Sewer," and "Environmental Damage" may apply.

(31) *Emergency Response:* Check all boxes that correspond with any emergency response and cleanup crews that participated in resolving the incident. If a fire crew, EMS, or police unit responded to the incident, include the report number.

(32) *Damages:* You are required to provide information on estimated damages if your damages exceed \$500.00. This figure includes the cost of the material lost, property damage, vehicle damage, response costs, and clean-up costs. If you do not know these amounts at the time you complete the report, or the actual costs are revised by more than \$25,000, you must submit a follow-up report after you determine the amounts. The following definitions explain each of the costs:

Material Loss: Enter the value of material released and unrecoverable. Base this entry on the amount of material released multiplied by the unit value (e.g., price per gallon or price per pound) as listed on the shipper's invoice. If the invoice is not available, estimate the cost per unit using the shipper's basis.

Carrier Damage: Enter the total value of damage incurred by the carrier. Major components include

costs to repair the damaged vehicle and costs resulting from damage to cargo. If the vehicle is declared "totaled," enter the insured value of the vehicle. This entry should not include damage to other property or to vehicles owned by other persons.

Property Damage: Enter the total value of costs resulting from damage to the property of others involved in the incident. These include: repair and replacement costs of other vehicles; repair and replacement costs to buildings and other fixed facilities; and restoration of open land beyond decontamination and cleanup.

Response Cost: Enter the total value of response costs. Response costs are those costs incurred immediately after the incident, and include local emergency response from police and fire departments and emergency response teams, as well as costs incurred by the responsible party. Response costs also include costs to contain the hazardous material released.

Remediation/Cleanup Cost: Enter the total value of the cost to cleanup and remediate the site. Cleanup costs are those costs incurred to collect, transport, and ultimately dispose of all material collected during the response phase. Remediation costs are those costs incurred to restore the incident scene to its pre-incident state, and could include excavation, disposal and replacement of contaminated soil, pumping, treatment and re-injection of contaminated groundwater, or absorption and disposal of hazardous material released into surface water.

(33a) *Did the hazardous material cause or contribute to a human fatality?* If a person was fatally injured by contact with the hazardous material or its vapors or by a fire or explosion that resulted from the hazardous material, check the "Yes" box and enter the number of fatalities that resulted directly from the hazardous material.

(33b) *Were there human fatalities that did not result from the hazardous material?* If the fatalities were not caused directly by the hazardous material, check the "Yes" box and enter the number of fatalities. An example: if a passenger car collided with a cargo tank carrying gasoline and the automobile driver was killed due to the collision, then the fatality was *not* caused by the hazardous material released. If, however, the accident resulted in the release of gasoline from the cargo tank and a resulting fire killed the automobile driver, then the fatality was caused by the hazardous material.

(34) *Did the hazardous material cause or contribute to a personal injury?* If a person was injured by contact with the hazardous material or its vapors or by a fire or explosion that resulted from the hazardous material, check the "Yes" box and enter the number of persons injured by the hazardous material.

Hospitalized means *admitted* to a medical facility, not treated and released from a facility, such as a hospital emergency room, where the person was never admitted to the hospital proper. Non-hospitalized individuals are those who may have received attention from medical personnel on-site or at a facility (including hospital emergency room), but were not admitted to a medical facility. Indicate the number of injured employees, emergency responders (firefighters, police, medics, etc.) and members of the general public.

- (35) *Did the hazardous material cause or contribute to an evacuation?* If the incident required the evacuation or removal of persons from a specific area because of possible or actual contact with the hazardous materials involved in the incident, check the "Yes" box. Separately specify the numbers of individuals from the general public evacuated and number of employees of the facility or workers in the area that were evacuated. Also provide the total number of individuals evacuated. Indicate the duration of the evacuation (in hours).
- (36) *Was a transportation artery or facility closed?* If a road or transportation facility was closed due to the incident, check the "Yes" box and indicate the duration (in hours) here.
- (37) *Was the material involved in a crash or derailment?* Check the "Yes" box if a hazardous material was involved in a crash or derailment. Provide the estimated speed and weather conditions at the time of the crash, such as rain, blowing snow, sleet, iced roadway, sun glare, fog, dry pavement, high winds, etc. Indicate if the vehicle overturned or left the roadway or track.

Part V: Air Incident Information

This section is for incidents with packagings transported or intended for transportation by aircraft. If your packaging was not transported or intended to be transported by air, skip this section.

- (38) *Was the shipment on a passenger aircraft?* Indicate whether the shipment in question was on a commercial passenger aircraft. If so, indicate if the material was tendered (accepted for shipment) as cargo, or was located in a passenger's baggage, either in the cabin or baggage compartment.
- (39) *Where did the incident occur or where was the incident discovered?* Indicate where in the course of transportation the incident occurred or was discovered.
- (40) *What phase(s) had the shipment already undergone prior to the incident?* Check all boxes that describe the transportation phases the shipment went through before the incident occurred or was discovered.

Part VI: Description of Events and Packaging Failure

Please describe the events involved in the incident to provide us with a better understanding of the incident. Include information that has not been collected elsewhere on this form, and include special scenarios, outstanding circumstances, or other information that provides a complete picture of the incident. Describe the sequence of events that led to the incident, the package failure (if any) and actions taken at the time of discovery. Submit photographs and diagrams when necessary for clarification. You may continue on additional sheets if necessary.

Part VII: Recommendations/ Actions Taken to Prevent Future Incidents

Recommendations may be preliminary in nature, may suggest actions by other parties, and may be subject to further investigation, refinement, acceptance,

or rejection. Often, it may be beyond the ability of the preparer to offer recommendations, but where such recommendations can be made they have the potential of resulting in important improvements with safety benefits. For instance, such information can help companies identify common problems and alert the DOT to the need for additional measures such as outreach or broad training needs. This information can also help support regulatory changes.

Part VIII: Contact Information

Provide the name, title, telephone number, fax number, business name and address, hazmat registration number and email address of the contact person at your company who can answer questions about the information provided on this form. Make sure to check the box that describes the function of your firm: carrier, shipper, facility owner/operator, or other. If "Other" is checked, describe the function.

Failure Codes for All Packaging Types—Complete List

Code	What Failed	Code	How Failed
101	Air Inlet	301	Abraded
102	Auxiliary Valve	302	Bent
103	Basic Material	303	Burst or Ruptured
104	Body	304	Cracked
105	Bolts or Nuts	305	Crushed
106	Bottom Outlet Valve	306	Failed to Operate
107	Check Valve	307	Gouged or Cut
108	Chime	308	Leaked
109	Closure (e.g., Cap, Top, or Plug)	309	Punctured
110	Cover	310	Ripped or Torn
111	Cylinder Neck or Shoulder	311	Structural
112	Cylinder Sidewall - Near Base	312	Torn Off or Damaged
113	Cylinder Sidewall - Other	313	Vented
114	Cylinder Valve		
115	Discharge Valve or Coupling	Code	Cause(s) of Failure
116	Excess Flow Valve	501	Abrasion
117	Fill Hole	502	Broken Component or Device
118	Flange	503	Commodity Self-ignition
119	Frangible Disc	504	Commodity Polymerization
120	Fusible Pressure Relief Device or Element	505	Conveyer or Material Handling Equipment Mishap
121	Gasket	506	Corrosion - Exterior
122	Gauging Device	507	Corrosion - Interior
123	Heater Coil	508	Defective Component or Device
124	High Level Sensor	509	Derailment
125	Hose	510	Deterioration or Aging
126	Hose Adaptor or Coupling	511	Dropped
127	Inlet (Loading) Valve	512	Fire, Temperature, or Heat
128	Inner Packaging	513	Forklift Accident
129	Inner Receptacle	514	Freezing
130	Lifting Feature	515	Human Error
131	Lifting Lug	516	Impact with Sharp or Protruding Object (e.g., nails)
132	Liner	517	Improper Preparation for Transportation
133	Liquid Line		
134	Liquid Valve	518	Inadequate Accident Damage Protection
135	Loading or Unloading Lines	519	Inadequate Blocking and Bracing
136	Locking Bar	520	Inadequate Maintenance
137	Manway or Dome Cover	521	Inadequate Preparation for Transportation
138	Mounting Studs	522	Inadequate Procedures
139	O-Ring or Seals	523	Inadequate Training
140	Outer Frame	524	Incompatible Product
141	Piping or Fittings	525	Incorrectly Sized Component or Device
142	Piping Shear Section	526	Loose Closure, Component, or Device
143	Pressure Relief Valve or Device - Non-Reclosing	527	Misaligned Material, Component, or Device
144	Pressure Relief Valve or Device -Reclosing	528	Missing Component or Device
145	Remote Control Device	529	Overfilled
146	Sample Line	530	Over-pressurized
147	Stub Sill (Tank Car)	531	Rollover Accident
148	Sump	532	Stub Sill Separation from Tank (Tank Cars)
149	Tank Head	533	Threads Worn or Cross Threaded
150	Tank Shell	534	Too Much Weight on Package
151	Thermometer Well	535	Valve Open
152	Threaded Connection	536	Vandalism
153	Vacuum Relief Valve	537	Vehicular Crash or Accident Damage
154	Valve Body	538	Water Damage
155	Valve Seat		
156	Valve Spring		
157	Valve Stem		
158	Vapor Valve		
159	Vent		
160	Washout		
161	Weld or Seam		

**Failure Codes by Packaging Type
General Non-bulk and IBCs**

Code	What Failed
103	Basic Material
104	Body
105	Bolts or Nuts
108	Chime
109	Closure (e.g., Cap, Top, or Plug)
110	Cover
119	Frangible Disc
120	Fusible Pressure Relief Device or Element
121	Gasket
125	Hose
128	Inner Packaging
129	Inner Receptacle
130	Lifting Feature
132	Liner
140	Outer Frame
143	Pressure Relief Valve or Device - Non-Reclosing
144	Pressure Relief Valve or Device - Reclosing
161	Weld or Seam
Code	How Failed
301	Abraded
302	Bent
303	Burst or Ruptured
304	Cracked
305	Crushed
306	Failed to Operate
307	Gouged or Cut
308	Leaked
309	Punctured
310	Ripped or Torn
311	Structural
312	Torn Off or Damaged
313	Vented
Code	Cause(s) of Failure
501	Abrasion
503	Commodity Self-ignition
504	Commodity Polymerization
505	Conveyer or Material Handling Equipment Mishap
506	Corrosion - Exterior
507	Corrosion - Interior
508	Defective Component or Device
510	Deterioration or Aging
511	Dropped
512	Fire, Temperature, or Heat
513	Forklift Accident
514	Freezing
515	Human Error
516	Impact with Sharp or Protruding Object (e.g., nails)
517	Improper Preparation for Transportation
518	Inadequate Accident Damage Protection
519	Inadequate Blocking and Bracing
520	Inadequate Maintenance
521	Inadequate Preparation for Transportation
522	Inadequate Procedures
523	Inadequate Training
524	Incompatible Product
525	Incorrectly Sized Component or Device
526	Loose Closure, Component, or Device
527	Misaligned Material, Component, or Device
528	Missing Component or Device
529	Overfilled
530	Over-pressurized
531	Rollover Accident
532	Stub Sill Separation from Tank (Tank Cars)
533	Threads Worn or Cross Threaded
534	Too Much Weight on Package
535	Valve Open
536	Vandalism
537	Vehicular Crash or Accident Damage
538	Water Damage

Failure Codes by Packaging Type (continued)**Cylinders****Code What Failed**

111	Cylinder Neck or Shoulder
112	Cylinder Sidewall - Near Base
113	Cylinder Sidewall - Other
114	Cylinder Valve
119	Frangible Disc
120	Fusible Pressure Relief Device or Element
122	Gauging Device
132	Liner
143	Pressure Relief Valve or Device - Non-Reclosing
144	Pressure Relief Valve or Device - Reclosing
161	Weld or Seam

Code How Failed

301	Abraded
303	Burst or Ruptured
304	Cracked
306	Failed to Operate
307	Gouged or Cut
308	Leaked
309	Punctured
313	Vented

Code Cause(s) of Failure

501	Abrasion
502	Broken Component or Device
503	Commodity Self-ignition
504	Commodity Polymerization
505	Conveyer or Material Handling Equipment Mishap
506	Corrosion - Exterior
507	Corrosion - Interior
508	Defective Component or Device
510	Deterioration or Aging
512	Fire, Temperature, or Heat
513	Forklift Accident
514	Freezing
515	Human Error
516	Impact with Sharp or Protruding Object (e.g., nails)
517	Improper Preparation for Transportation
519	Inadequate Blocking and Bracing
520	Inadequate Maintenance
521	Inadequate Preparation for Transportation
522	Inadequate Procedures
523	Inadequate Training
524	Incompatible Product
525	Incorrectly Sized Component or Device
526	Loose Closure, Component, or Device
527	Misaligned Material, Component, or Device
528	Missing Component or Device
529	Overfilled
530	Over-pressurized
535	Valve Open
536	Vandalism
537	Vehicular Crash or Accident Damage

Portable Tanks**Code What Failed**

105	Bolts or Nuts
106	Bottom Outlet Valve
107	Check Valve
108	Chime
109	Closure (e.g., Cap, Top, or Plug)
110	Cover
119	Frangible Disc
120	Fusible Pressure Relief Device or Element
121	Gasket
122	Gauging Device
125	Hose
127	Inlet (Loading) Valve
131	Lifting Lug
132	Liner
135	Loading or Unloading Lines
137	Manway or Dome Cover
140	Outer Frame
141	Piping or Fittings
143	Pressure Relief Valve or Device - Non-Reclosing
144	Pressure Relief Valve or Device - Reclosing
152	Threaded Connection
153	Vacuum Relief Valve
161	Weld or Seam

Code How Failed

301	Abraded
302	Bent
303	Burst or Ruptured
304	Cracked
305	Crushed
306	Failed to Operate
307	Gouged or Cut
308	Leaked
309	Punctured
310	Ripped or Torn
312	Torn Off or Damaged
313	Vented

Code Cause(s) of Failure

501	Abrasion
502	Broken Component or Device
503	Commodity Self-ignition
504	Commodity Polymerization
505	Conveyer or Material Handling Equipment Mishap
506	Corrosion - Exterior
507	Corrosion - Interior
508	Defective Component or Device
509	Derailment
510	Deterioration or Aging
511	Dropped
512	Fire, Temperature, or Heat
514	Freezing
515	Human Error
517	Improper Preparation for Transportation
520	Inadequate Maintenance
521	Inadequate Preparation for Transportation
522	Inadequate Procedures
523	Inadequate Training
524	Incompatible Product
525	Incorrectly Sized Component or Device
526	Loose Closure, Component, or Device
527	Misaligned Material, Component, or Device
528	Missing Component or Device
529	Overfilled
530	Overpressurized
531	Rollover Accident
536	Vandalism
537	Vehicular Crash or Accident Damage

Bulk Tank Vehicles—Cargo Tank Motor Vehicles (CTMV) and Tank Cars**Code What Failed**

101	Air Inlet
105	Bolts or Nuts
106	Bottom Outlet Valve
107	Check Valve
110	Cover
115	Discharge Valve or Coupling
116	Excess Flow Valve
117	Fill Hole
118	Flange
119	Frangible Disc
120	Fusible Pressure Relief Device or Element
121	Gasket
122	Gauging Device
123	Heater Coil
124	High Level Sensor
125	Hose
126	Hose Adaptor or Coupling
127	Inlet (Loading) Valve
131	Lifting Lug
132	Liner
133	Liquid Line
134	Liquid Valve
135	Loading or Unloading Lines
136	Locking Bar
137	Manway or Dome Cover
138	Mounting Studs
139	O-Ring or Seals
141	Piping or Fittings
142	Piping Shear Section
143	Pressure Relief Valve or Device - Non-Reclosing
144	Pressure Relief Valve or Device - Reclosing
145	Remote Control Device
146	Sample Line
147	Stub Sill (Tank Car)
148	Sump
149	Tank Head
150	Tank Shell
151	Thermometer Well
152	Threaded Connection
153	Vacuum Relief Valve
154	Valve Body
155	Valve Seat
156	Valve Spring
157	Valve Stem
158	Vapor Valve
159	Vent
160	Washout
161	Weld or Seam

Code How Failed

301	Abraded
302	Bent
303	Burst or Ruptured
304	Cracked
305	Crushed
306	Failed to Operate
307	Gouged or Cut
308	Leaked
309	Punctured
310	Ripped or Torn
311	Structural
312	Torn Off or Damaged
313	Vented

Code Cause(s) of Failure

501	Abrasion
502	Broken Component or Device
503	Commodity Self-ignition
504	Commodity Polymerization

(Continued on next page)

Failure Codes by Packaging Type**Bulk Tank Vehicles—Cargo Tank
Motor Vehicles (CTMV) and Tank Cars****Code Cause(s) of Failure**

505	Conveyer or Material Handling Equipment Mishap
506	Corrosion - Exterior
507	Corrosion - Interior
508	Defective Component or Device
509	Derailment
510	Deterioration or Aging
511	Dropped
512	Fire, Temperature, or Heat
515	Human Error
517	Improper Preparation for Transportation
518	Inadequate Accident Damage Protection
519	Inadequate Blocking and Bracing
520	Inadequate Maintenance
521	Inadequate Preparation for Transportation
522	Inadequate Procedures
523	Inadequate Training
524	Incompatible Product
525	Incorrectly Sized Component or Device
526	Loose Closure, Component, or Device
527	Misaligned Material, Component, or Device
528	Missing Component or Device
529	Overfilled
530	Overpressurized
531	Rollover Accident
532	Stub Sill Separation from Tank (Tank Cars)
533	Threads Worn or Cross Threaded
536	Vandalism
537	Vehicular Crash or Accident Damage

**Incident Reporting
Requirements****§ 171.15 Immediate notice of certain hazardous materials incidents.**

(a) General. As soon as practical but no later than 12 hours after the occurrence of any incident described in paragraph (b) of this section, each person in physical possession of the hazardous material must provide notice by telephone to the National Response Center (NRC) on 800-424-8802 (toll-free) or 202-267-2675 (toll call). Notice involving an infectious substance (etiologic agent) may be given to the Director, Centers for Disease Control and Prevention (CDC), U.S. Public Health Service, Atlanta, Ga., 800-232-0124 (toll-free), in place of notice to the NRC. Each notice must include the following information:

- (1) Name of reporter;
- (2) Name and address of person represented by reporter;
- (3) Phone number where reporter can be contacted;
- (4) Date, time, and location of incident;
- (5) The extent of injury, if any;
- (6) Class or division, proper shipping name, and quantity of hazardous materials involved, if such information is available; and
- (7) Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.

(b) Reportable Incident. A telephone report is required whenever any of the following occurs during the course of transportation in commerce (including loading, unloading, and temporary storage):

- (1) As a direct result of a hazardous material—
 - (i) A person is killed;
 - (ii) A person receives an injury requiring admittance to a hospital;
 - (iii) The general public is evacuated for one hour or more;
 - (iv) A major transportation artery or facility is closed or shut down for one hour or more; or

(v) The operational flight pattern or routine of an aircraft is altered;

- (2) Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material (see also § 176.48 of this subchapter);
- (3) Fire, breakage, spillage, or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste;
- (4) A release of a marine pollutant occurs in a quantity exceeding 450 L (119 gallons) for a liquid or 400 kg (882 pounds) for a solid; or
- (5) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgment of the person in possession of the hazardous material, it should be reported to the NRC even though it does not meet the criteria of paragraph (b) (1), (2), (3) or (4) of this section.

(c) Written report. Each person making a report under this section must also make the report required by § 171.16 of this Subpart.

Note to § 171.15: Under 40 CFR 302.6, EPA requires persons in charge of facilities (including transport vehicles, vessels, and aircraft) to report any release of a hazardous substance in a quantity equal to or greater than its reportable quantity, as soon as that person has knowledge of the release, to DOT's National Response Center at (toll-free) 800-424-8802 or (toll) 202-267-2675.

§ 171.16 Detailed hazardous materials incident reports.

(a) General. Each person in physical possession of a hazardous material at the time that any of the following incidents occurs during transportation (including loading, unloading, and temporary storage) must submit a Hazardous Materials Incident Report on DOT Form F 5800.1 (01-2004) within 30 days of discovery of the incident:

- (1) Any of the circumstances set forth in § 171.15(b);
- (2) An unintentional release of a hazardous material or the discharge of any quantity of hazardous waste;

- (3) A specification cargo tank with a capacity of 1,000 gallons or greater containing any hazardous material suffers structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system, even if there is no release of hazardous material; or
- (4) An undeclared hazardous material is discovered.

(b) Providing and retaining copies of the report.

Each person reporting under this section must—

- (1) Submit a written Hazardous Materials Incident Report to the Information Systems Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001, or an electronic Hazardous Material Incident Report to the Information System Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001 at <http://hazmat.dot.gov>;
- (2) For an incident involving transportation by aircraft, submit a written or electronic copy of the Hazardous Materials Incident Report to the FAA Security Field Office nearest the location of the incident; and
- (3) Retain a written or electronic copy of the Hazardous Materials Incident Report for a period of two years at the reporting person's principal place of business. If the written or electronic Hazardous Materials Incident Report is maintained at other than the reporting person's principal place of business, the report must be made available at the reporting person's principal place of business within 24 hours of a request for the report by an authorized representative or special agent of the Department of Transportation.

(c) Updating the incident report. A Hazardous Materials Incident Report must be updated within one year of the date of occurrence of the incident whenever:

- (1) A death results from injury caused by a hazardous material;
- (2) There was a misidentification of the hazardous material or packaging information on a prior incident report;
- (3) Damage, loss or related cost that was not known when the initial incident report was filed becomes known; or
- (4) Damage, loss, or related cost changes by \$25,000 or more, or 10% of the prior total estimate, whichever is greater.

(d) Exceptions. Unless a telephone report is required under the provisions of § 171.15 of this part, the requirements of paragraphs (a), (b), and (c) of this section do not apply to the following incidents:

- (1) A release of a minimal amount of material from—
 - (i) a vent, for materials for which venting is authorized;
 - (ii) the routine operation of a seal, pump, compressor, or valve; or
 - (iii) connection or disconnection of loading or unloading lines, provided that the release does not result in property damage.
- (2) An unintentional release of hazardous material when:
 - (i) The material is properly classed as—
 - (A) ORM-D; or
 - (B) a Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9;
 - (ii) Each packaging has a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
 - (iii) The total aggregate release is less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids; and
 - (iv) The material is not—
 - (A) offered for transportation or transported by aircraft,
 - (B) a hazardous waste, or
 - (C) an undeclared hazardous material.

- (3) An undeclared hazardous material discovered in an air passenger's checked or carry-on baggage during the airport screening process. (For discrepancy reporting by carriers, see § 175.31 of this subchapter.)



Hazardous Materials Incident Report

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

INSTRUCTIONS: Submit this report to the Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

PART I - REPORT TYPE

1. This is to report: ☐ A) A hazardous material incident ☐ B) An undeclared shipment with no release
☐ C) A specification cargo tank 1,000 gallons or greater containing any hazardous materials that (1) received structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system and (2) did not have a release.
2. Indicate whether this is: ☐ An initial report ☐ A supplemental (follow-up) report ☐ Additional Pages

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident: _____ 4. Time of Incident (use 24-hour time): _____
5. Enter National Response Center Report Number (if applicable): _____
6. If you submitted a report to another Federal DOT agency, enter the agency and report number: _____
7. Location of Incident: City: _____ County: _____ State: _____ ZIP Code (if known): _____
Street Address/Mile Marker/Yardname/Airport/Body of Water/River Mile _____
8. Mode of Transportation ☐ Air ☐ Highway ☐ Rail ☐ Water
9. Transportation Phase ☐ In Transit ☐ Loading ☐ Unloading ☐ In Transit Storage
10. Carrier/Reporter Name _____
Street _____
City _____ State _____ ZIP Code _____
Federal DOT ID Number _____ Hazmat Registration Number _____
11. Shipper/Officer Name _____
Street _____
City _____ State _____ ZIP Code _____
Waybill/Shipping Paper _____ Hazmat Registration Number _____
12. Origin (if different from shipper address) Street _____
City _____ State _____ ZIP Code _____
13. Destination Street _____
City _____ State _____ ZIP Code _____
14. Proper Shipping Name of Hazardous Material: _____
15. Technical/Trade Name: _____
16. Hazardous Class/ Division: _____ 17. Identification Number: _____ (e.g. UN2764, NA 2020) 18. Packing Group: _____ (if applicable) 19. Quantity Released: _____ (Include Measurement Units)
20. Was the material shipped as a hazardous waste? ☐ Yes ☐ No If yes, provide the EPA Manifest Number: _____
21. Is this a Toxic by Inhalation (TIH) material? ☐ Yes ☐ No If yes, provide the Hazard Zone: _____
22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? ☐ Yes ☐ No
If yes, provide the Exemption, Approval, or CA number: _____
23. Was this an undeclared hazardous materials shipment? ☐ Yes ☐ No

PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

- | | | | |
|-----------------------------------|------------------------------|--|--------------------------------------|
| <input type="checkbox"/> Non-bulk | <input type="checkbox"/> IBC | <input type="checkbox"/> Cargo tank Motor Vehicle (CTMV) | <input type="checkbox"/> Tank Car |
| <input type="checkbox"/> Cylinder | <input type="checkbox"/> RAM | <input type="checkbox"/> Portable Tank | <input type="checkbox"/> Other _____ |

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident. Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in Part VI.

1. What Failed: _____	How Failed: _____	Causes of Failure: _____
2. What Failed: _____	How Failed: _____	Causes of Failure: _____

26a. Provide the packaging identification markings, if available.

Identification Markings: _____

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Packaging Type: _____

Material of Construction: _____

Head Type (Drums only): ☐ Removable ☐ Non - Removable

Single Package or Inner Packaging (if any):

Packaging Type: _____

Material of Construction: _____

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Package Capacity: _____

Amount in Package: _____

Number in Shipment: _____

Number Failed: _____

Single Package or Inner Packaging (if any):

Package Capacity: _____

Amount in Package: _____

Number in Shipment: _____

Number Failed: _____

28. Provide packaging construction and test information, as appropriate:

Manufacturer: _____

Serial Number: _____

Material of Construction: _____ (if Tank Car, CTMV, Portable Tank, or Cylinder)

Design Pressure: _____ (if Tank Car, CTMV, Portable Tank)

Shell Thickness: _____ (if Tank Car, CTMV, Portable Tank)

Head Thickness: _____ (if Tank Car, CTMV)

Service Pressure: _____ (if Cylinder)

If valve or device failed:

Type: _____	Manufacturer: _____	Model: _____
	(if present and legible)	(if present and legible)

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category: ☐ Type A ☐ Type B ☐ Type C ☐ Excepted ☐ Industrial

Packaging Certification: ☐ Self Certified ☐ U.S. Certification Certification Number _____

Nuclide(s) Present: _____ Transport Index: _____

Activity: _____ Critical Safety Index: _____

PART IV - CONSEQUENCES

30. Result of Incident (check all that apply): ☐ Spillage ☐ Fire ☐ Explosion ☐ Material Entered Waterway/Storm Sewer
☐ Vapor (Gas) Dispersion ☐ Environmental Damage ☐ No Release

31. Emergency Response : The following entities responded to the incident: (Check all that apply)

☐ Fire/EMS Report # _____ ☐ Police Report # _____ ☐ In-house cleanup ☐ Other Cleanup

32. Damages: Was the total damage cost more than \$500? ☐ Yes ☐ No

If yes, enter the following information: If no, go to question 33.

Material Loss: _____ Carrier Damage: _____ Property Damage: _____ Response Cost: _____ Remediation/Cleanup Cost: _____
\$ _____ \$ _____ \$ _____ \$ _____ \$ _____

(See damage definitions in the instructions)

33a. Did the hazardous material cause or contribute to a human fatality? ☐ Yes ☐ No

If yes, enter the number of fatalities resulting from the hazardous material:

Fatalities: _____ Employees _____ Responders _____ General Public _____

33b. Were there human fatalities that did not result from the hazardous material? ☐ Yes ☐ No If yes, how many? _____

34. Did the hazardous material cause or contribute to personal injury? ☐ Yes ☐ No

If yes, enter the number of injuries resulting from the hazardous material:

Hospitalized (Admitted Only): _____ Employees _____ Responders _____ General Public _____

Non-Hospitalized: _____ Employees _____ Responders _____ General Public _____

(e.g.: On site first aid or Emergency Room observation and release)

35. Did the hazardous material cause or contribute to an evacuation? ☐ Yes ☐ No

If yes, provide the following information:

Total number of general public evacuated _____ Total number of employees evacuated _____ Total Evacuated _____

Duration of the evacuation _____ (hours)

36. Was a major transportation artery or facility closed? ☐ Yes ☐ No If yes, how many? _____ (hours)

37. Was the material involved in a crash or derailment? ☐ Yes ☐ No

If yes, provide the following information: Estimated speed (mph): _____ Weather conditions: _____

Vehicle overturn? ☐ Yes ☐ No

Vehicle left roadway/track? ☐ Yes ☐ No

PART V - AIR INCIDENT INFORMATION (please refer to § 175.31 to report a discrepancy for air shipments)

38. Was the shipment on a passenger aircraft? ☐ Yes ☐ No

If yes, was it tendered as cargo, or as passenger baggage?

☐ Cargo ☐ Passenger baggage

39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

☐ Air carrier cargo facility ☐ Sort center ☐ Baggage area
☐ By surface to/from airport ☐ During flight ☐ During loading/unloading of aircraft

40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

☐ Shipment had not been transported ☐ Transported by air (first flight) ☐ Transport by air (subsequent flights)
☐ Initial transport by highway to cargo facility ☐ Transfer at sort center/cargo facility

PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE

Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

PART VIII- CONTACT INFORMATION

Contact's Name (Type or Print): _____	Telephone Number: () _____
Contact's Title: _____	Fax Number: () _____
Business Name and Address: _____	Hazmat Registration Number (if not already provided): _____
E-mail Address: _____	Date: _____
Preparer is: <input type="checkbox"/> Carrier <input type="checkbox"/> Shipper <input type="checkbox"/> Facility <input type="checkbox"/> Other _____	